

NOTICES OF PROPOSED RULEMAKING

Unless exempted by A.R.S. § 41-1005, each agency shall begin the rulemaking process by first submitting to the Secretary of State's Office a Notice of Rulemaking Docket Opening followed by a Notice of Proposed Rulemaking that contains the preamble and the full text of the rules. The Secretary of State's Office publishes each Notice in the next available issue of the *Register* according to the schedule of deadlines for *Register* publication. Under the Administrative Procedure Act (A.R.S. § 41-1001 et seq.), an agency must allow at least 30 days to elapse after the publication of the Notice of Proposed Rulemaking in the *Register* before beginning any proceedings for making, amending, or repealing any rule. (A.R.S. §§ 41-1013 and 41-1022)

NOTICE OF PROPOSED RULEMAKING

TITLE 15. REVENUE

CHAPTER 2. DEPARTMENT OF REVENUE INCOME AND WITHHOLDING TAX SECTION SUBCHAPTER D. CORPORATIONS

PREAMBLE

- 1. Sections Affected** **Rulemaking Action**
R15-2D-102 New Section
- 2. The specific authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**
Authorizing statute: A.R.S. § 42-1005
Implementing statutes: A.R.S. §§ 43-961 and 43-1132
- 3. A list of all previous notices appearing in the Register addressing the proposed rule:**
Notice of Rulemaking Docket Opening: 7 A.A.R. 3490, August 10, 2001
- 4. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:**

Name:	Jim Bilski, Tax Analyst
Address:	Tax Research and Analysis Section Department of Revenue 1600 W. Monroe Phoenix, AZ 85007
Telephone:	(602) 542-4672
Fax:	(602) 542-4680
E-mail:	BilskiJ@revenue.state.az.us
- 5. An explanation of the rule, including the agency's reasons for initiating the rule:**
The rule provides guidance to corporate taxpayers and Department personnel in allocating deductions to nontaxable foreign dividends. The rule provides a safe harbor computation that taxpayers may elect to determine the amount of deductions allocable to nontaxable foreign dividends.
- 6. Reference to any study that the agency relied on in its evaluation of or justification for the proposed rule and where the public may obtain or review the study, all data underlying each study, any analysis of the study and other supporting material:**
For purposes of determining the safe harbor computation, the Department used data from studies by the Internal Revenue Service of the federal corporate foreign tax credit for tax years 1994, 1995, and 1996. The studies are published in the following issues of the Internal Revenue Service's Statistics of Income Bulletin: Fall 1998 (for 1994), Fall 1999 (for 1995), and Summer 2000 (for 1996). The studies can also be obtained from the Internal Revenue Service's Internet web site, at www.irs.gov, under International Statistics.

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7. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

8. The preliminary summary of the economic, small business, and consumer impact:

It is expected that the benefits of this rule will be greater than the costs. Corporate taxpayers with foreign dividends that elect the safe harbor method should experience a reduction in return-preparation costs. The taxpayers and the Department should experience a reduction in audit and litigation costs due to the safe harbor computation. The Department will incur minimal costs to revise applicable tax forms and instructions. The Department, Governor's Regulatory Review Council, and the Secretary of State's Office will incur costs associated with the rulemaking process.

9. The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:

Name: Jim Bilski, Tax Analyst
Address: Tax Research and Analysis Section
Department of Revenue
1600 W. Monroe
Phoenix, AZ 85007
Telephone: (602) 542-4672
Fax: (602) 542-4680
E-mail: BilskiJ@revenue.state.az.us

10. The time, place, and nature of the proceedings for the making, amendment, or repeal of the rule, or if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rule:

Date: September 26, 2001
Time: 9:00 a.m.
Location: Department of Revenue, North Valley Office
2902 W. Agua Fria Freeway
Phoenix, AZ
Conference Room 2
Nature: Public hearing on the proposed rulemaking

A person may submit written comments regarding the proposed rulemaking action by submitting the comments no later than 5:00 p.m., September 26, 2001, to the person listed in item #4.

11. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:

None

12. Incorporations by reference and their location in the rules:

None

13. The full text of the rules follows:

TITLE 15. REVENUE

**CHAPTER 2. DEPARTMENT OF REVENUE
INCOME AND WITHHOLDING TAX SECTION
SUBCHAPTER D. CORPORATIONS**

ARTICLE 1. GENERAL

Section
R15-2D-102. Deductions Allocable to Foreign Dividends

ARTICLE 1. GENERAL

R15-2D-102. Deductions Allocable to Foreign Dividends

- A.** A taxpayer is not allowed any deductions that are allocable to foreign dividends that are subtracted from Arizona gross income under A.R.S. § 43-1122. In this Section, “deduction” includes subtractions and other negative adjustments. If the deduction allocable to foreign dividends is included in the computation of the taxpayer’s federal taxable income, the taxpayer shall add the amount of the deduction to Arizona gross income.
- B.** The Department shall not modify the amount of the addition required under subsection (A) if the taxpayer elects to compute the addition as follows:
 $(A \div B) \times (C) \times 20\%$
The above variables are defined as follows:
“A” is the foreign dividends (including gross-up) subtracted from income under A.R.S. § 43-1122;
“B” is the total income from sources outside the United States, as determined under Internal Revenue Code §§ 861 through 865 and the related regulations, that is included in the computation of federal taxable income of all the corporations included in the taxpayer’s federal income tax return; and
“C” is the total deductions allocated or apportioned to income from sources outside the United States, as determined under Internal Revenue Code §§ 861 through 865 and the related regulations, that are included in the computation of federal taxable income of all the corporations included in the taxpayer’s federal income tax return.
- C.** The election in subsection (B) shall be made with the original filing of the taxpayer’s Arizona Corporation Income Tax Return.
- D.** If a taxpayer does not compute the addition to income required under subsection (A) by using the method allowed under subsection (B), the taxpayer shall determine the addition to income pursuant to the allocation and apportionment provisions of Internal Revenue Code §§ 861 through 865 and the related regulations or by an alternative method that the taxpayer demonstrates fairly determines the deductions allocable to exempt foreign dividends.

NOTICE OF PROPOSED RULEMAKING

TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 11. DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY STANDARDS

PREAMBLE

- | | |
|------------------------------------|---------------------------------|
| <u>1. Sections Affected</u> | <u>Rulemaking Action</u> |
| Article 6 | New Article |
| R18-11-601 | New Section |
| R18-11-602 | New Section |
| R18-11-603 | New Section |
| R18-11-604 | New Section |
| R18-11-605 | New Section |
| R18-11-606 | New Section |
- 2. The specific authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**
Authorizing statutes: A.R.S. §§ 49-232(C), 49-233(C), and 49-235
Implementing statutes: A.R.S. §§ 49-232 and 49-233
- 3. A list of all previous notices appearing in the Register addressing the final rule:**
Notice of Rulemaking Docket Opening: 7 A.A.R. 1323, March 23, 2001
- 4. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:**
Name: Shirley J. Conard
Address: Department of Environmental Quality
3033 N. Central Avenue, M0401A-422
Phoenix, AZ 85012-2809
Telephone: (602) 207-4632 (Metro-Phoenix area) or 1-800-234-5677, 4632 (other areas)

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Fax: (602) 207-4674
E-mail: conard.shirley@ev.state.az.us

5. An explanation of the rule, including the agency's reasons for initiating the rule:

This rulemaking establishes a new Article dealing with the process and methodology required under A.R.S. § 49-232(C) for identifying impaired surface waters. The rulemaking establishes appropriate criteria for data quality assurance and quality control, a process to add or remove waters to the list of impaired waters outside of the normal listing cycle, and public participation procedures. The rules also specify the factors required under A.R.S. § 49-233(C) for prioritizing impaired surface waters that require development of total maximum daily loads.

Background

The water quality of the nation's surface waters is improving in many areas, but some surface waters still do not fully meet standards developed to protect fish, drinking water, and other beneficial uses. Over the past 30 years, major improvements throughout the United States have been made in controlling direct discharges from industrial and municipal wastewater treatment facilities. Now, the primary problem confronting our waters is polluted runoff from a variety of daily activities. This type of pollution comes from diverse sources such as stormwater from urban areas, sediments from new construction or improper land clearing, fertilizers and pesticides from lawns and agriculture, and increased stream temperature from habitat destruction.

The Clean Water Act (CWA) requires states to adopt standards for the protection of surface water quality. These standards are designed to maintain water quality that will support the beneficial uses assigned to a surface water. Beneficial uses include domestic water source; aquatic life support for fishes, associated aquatic life and waterfowl; bathing, swimming, and recreational uses; fish consumption, agricultural irrigation, and livestock watering. While there may be several beneficial uses assigned to a river, stream, or lake, the CWA requires the Department to protect the *most sensitive* designated beneficial uses assigned to the surfaced water.

The water quality standards employed to maintain these beneficial uses and protect human health, aquatic life, and wildlife, include numeric criteria for parameters such as bacteria, pH, turbidity, dissolved oxygen, temperature, and certain toxic or carcinogenic compounds, and narrative criteria for parameters such as the growth of aquatic weeds or algae, toxicity, color, and sediment deposits.

Changes in water quality conditions may result from either point source or nonpoint source discharges. Point source discharges have an identifiable surface water entry point such as a wastewater treatment plant discharge pipe, well, or canal. Nonpoint sources contribute pollutants to waters over an extended area, generally in a diffuse manner. Point source discharges are regulated by the federal National Pollutant Discharge Elimination System (NPDES) program, the surface water discharge permitting program described in section 402 of the CWA. (Arizona anticipates that by July 2002, it will have EPA approval to implement the federal NPDES program.) Timber harvesting and agricultural operations such as grazing are examples of activities often related to nonpoint sources of pollution. Nonpoint sources are addressed through the use of voluntary Best Management Practices (BMPs) designed to reduce the water quality impacts of land use activities. Discharge permits and nonpoint source BMPs are the primary means for maintaining or restoring water quality.

The Clean Water Act

The CWA was established to restore and maintain the chemical, physical, and biological integrity of the nation's waters to, wherever attainable, provide for the protection and propagation of fish, shellfish, and wildlife; for recreation in and on the nation's waters; and for the development and implementation of programs to control nonpoint sources of pollution. This is commonly referred to as the "fishable, swimmable" goals of the CWA.

Section 305(b) of the CWA requires states to prepare and submit to EPA a biennial report that describes the water quality of all surface waters in the state. Each state must monitor water quality and review available data and information from various sources to determine if water quality standards are met. From this 305(b) Report and other sources of information, the 303(d) List is created. This list identifies those streams that do not meet one or more of its designated beneficial uses. These waters are known as "water quality limited segments" or "impaired waters." Identifying a surface water as impaired may be based on an evaluation of physical, chemical, or biological data demonstrating evidence of a numeric standard exceedance or a narrative standard exceedance, beneficial use impairment, or on a declining trend in water quality or the health of the biotic community under 40 CFR 130.7(b)(3).

Section 303(d) of the CWA requires each state to prepare a list of surface water segments not meeting surface water quality standards or that are not expected to meet state surface water quality standards after implementation of technology-based controls. The draft list is revised and finalized based on public input for submission to EPA. At a minimum, the following sources of data are considered:

- Waters identified in the 305(b) report as partially or not meeting water quality standards;
- Waters for which dilution calculations or predictive models indicate nonattainment of standards;
- Waters for which problems have been reported by other agencies, institutions, and the public; and
- Waters identified as impaired or threatened in the state's nonpoint assessments submitted to EPA under section 319 of the CWA.

The state must prioritize the identified impaired waters for development of a total maximum daily load (TMDL). A TMDL is a scientific determination of the maximum amount, or "load," of a pollutant that a river, lake, or other surface water can tolerate or assimilate without exceeding surface water quality standards that protect public health, aquatic life, wildlife, and their habitat. Once a TMDL is established, that "load" is then allocated between the various identified point and nonpoint sources of that pollutant in the watershed.

When the 303(d) List and supporting documentation are submitted to EPA for review and approval, the submission constitutes the bulk of the administrative record supporting EPA's approval of the list. The submission contains the 303(d) List, including the pollutants impairing water quality, the priorities, and the surface waters targeted for TMDL development during the next listing cycle; a description of the process used to develop the 303(d) List; the basis for listing decisions, including the reasons for not including a surface water or segment on the list; and a summary of the response to public comments. Where there are exceedances of standards, 40 CFR 130.7(b)(6)(iv) requires a state to demonstrate "good cause" for not listing a surface water and places the burden of proof on the state to justify excluding a surface water from the list.

Arizona's Current 303(d) List of Impaired Waters

The assessment of streams, lakes, and wetlands to identify "impaired" waters for inclusion on the 303(d) List is an important step in a process intended to ensure that all surface waters in the state have water quality adequate to support all of their beneficial uses.

The 303(d) List is compiled using all readily available, credible, and scientific data to assess water quality and determine which surface waters are impaired. The list is developed and presented for public comment. After all public comments are reviewed and considered, the final list is prioritized and TMDLs are developed and implemented in an effort to restore the listed surface waters to support its beneficial uses.

Arizona's current 303(d) list was developed and approved by EPA in 1998. On March 31, 2000, EPA announced it was eliminating the requirement to submit a list for 2000. The next list, which is due to EPA on April 1, 2002, is currently under development. The 1998 303(d) List contains 102 surface waters that are ranked from high to low for the development of a TMDL. The 303(d) List notes those waters that are targeted for development of a TMDL within the two years following the publication of the list.

The 303(d) List identifies the locations of impaired surface waters in Arizona; which pollutant is causing the impairment; comments about the status of TMDL development or other actions to bring the water into compliance, probable sources of the pollutants, and other pertinent information. *Pollutant* means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. However, high levels of a pollutant occurring solely due to natural occurring conditions, and not due to man's activities, are not considered a violation of Arizona's water quality standards.

In the field of water quality, a stressor is a pollutant or other identified cause of impairment to a surface water. Based on the 1998 303(d) List and the year 2000 305(b) Assessment Report, Figures 1 and 2 below, show the common stressors in Arizona's streams and lakes.

Figure 1. Stressors Impacting Streams (Miles of Stressors Impacted)

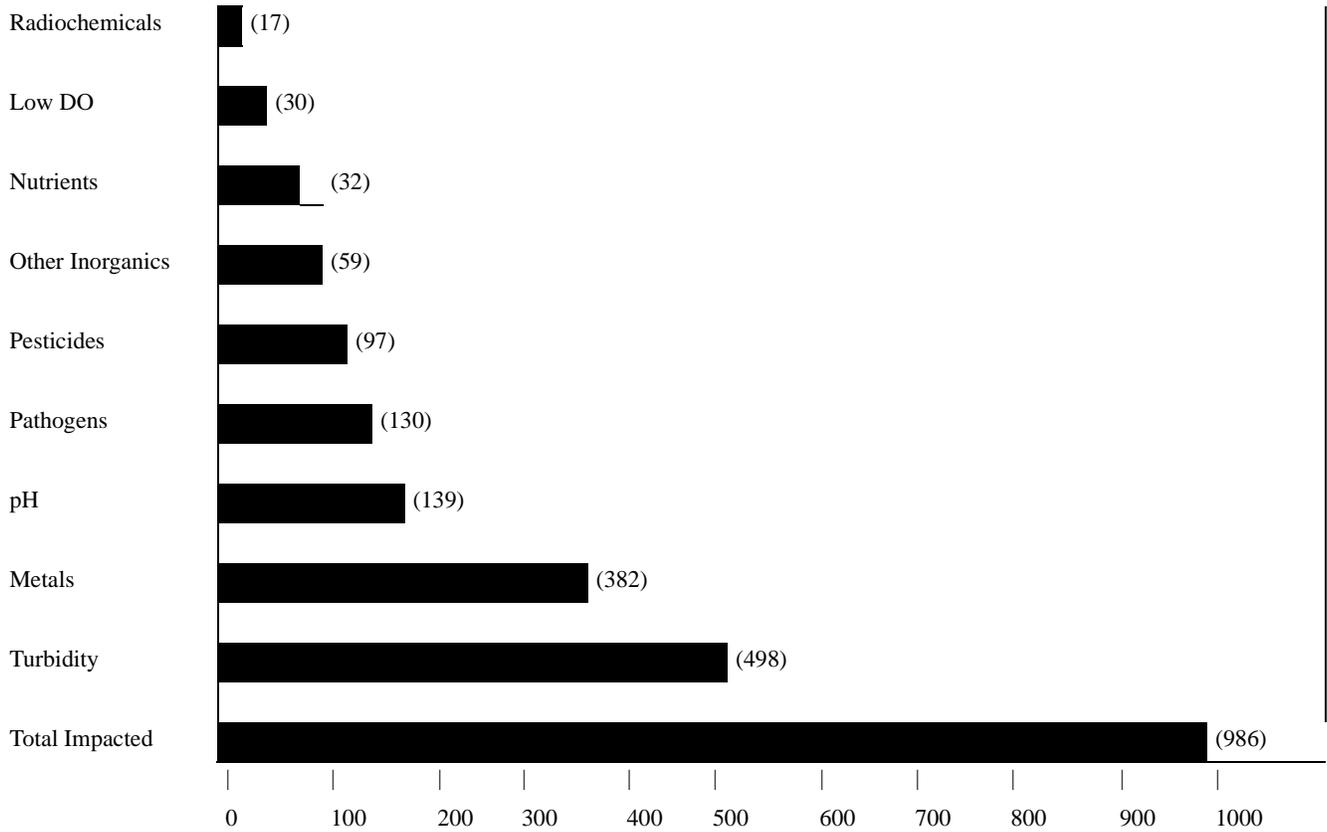
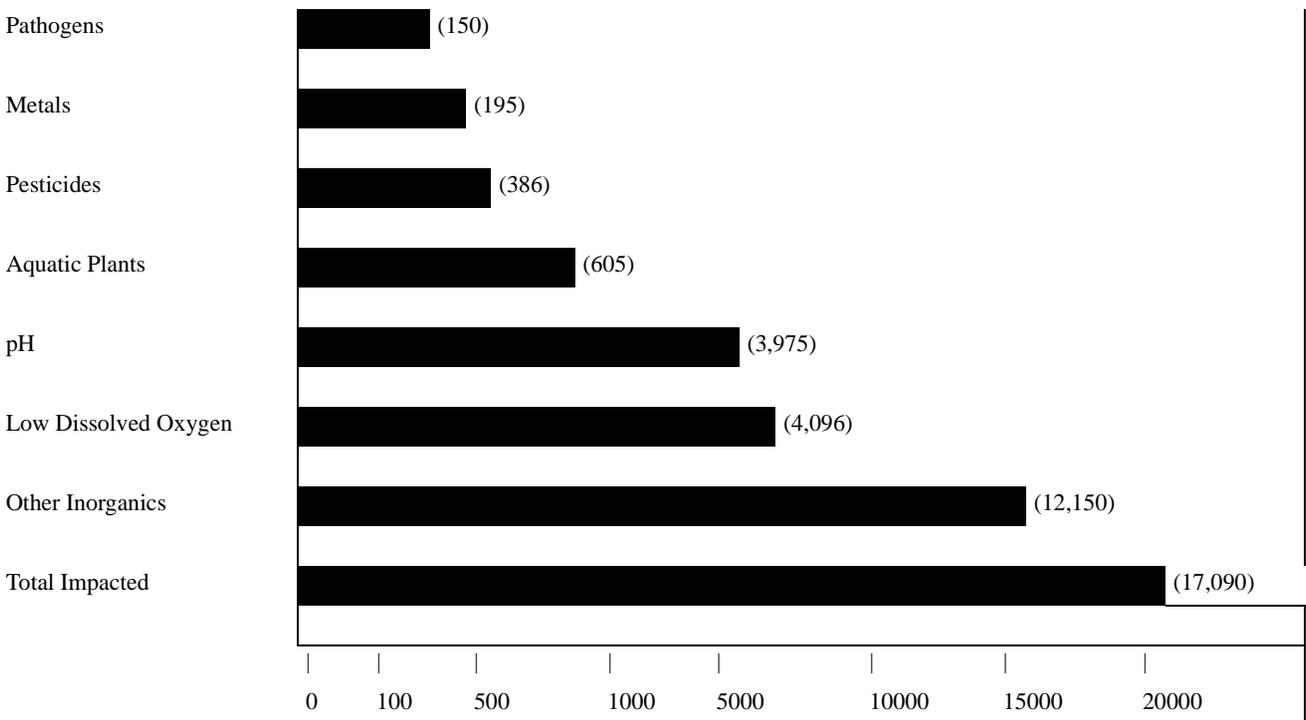


Figure 2. Stressors Impacting Lakes (Acres of Lakes Impacted)



Turbidity, which is a measure of the clarity of water, is the most common stressor in Arizona's streams. Turbidity standards are developed to protect aquatic and wildlife designated uses because high turbidity may be associated with habitat degradation due to excessive sedimentation and algal blooms. Sources of sediment are varied but can include erosion from road building, construction, forestry, grazing, and agriculture. Large quantities of sediment can also be deposited in surface waters during seasonal runoff events. The Department is developing a new sediment standard that acknowledges that high sediment loads that can be transported during high flow events such as flash floods and monsoons in arid environments.

Metals are significant water quality stressors in Arizona streams. Metals can leach from soil or mineralized rock in areas where they are exposed by road cuts, mining activities, or land development. Ore bodies can also naturally contribute metals to streams and lakes through runoff after storm events and through groundwater recharge.

Low dissolved oxygen, high pH and algal blooms (noxious weeds) or a combination of these often occurs in Arizona's shallow lakes. Low DO and high pH stress aquatic organisms and can contribute to fish kills. High densities of submerged and emergent aquatic vegetation can restrict recreational activities and, because algae consume oxygen in the water at night, sometimes cause fish kills.

Probable sources of stressors impacting Arizona's streams and lakes that are not meeting their designated uses are shown in Figures 3 and 4 below. Often more than one stressor impacts a surface water. The Department attempts to identify probable sources, as part of the 303(d) listing process, but accurate identification generally requires special investigation or a TMDL analysis. Each 305(b) Report shows potential sources of stressors based on best available information, knowledge of land uses, geology, and best professional judgement.

Figure 3. Probable Sources of Stressors in Streams

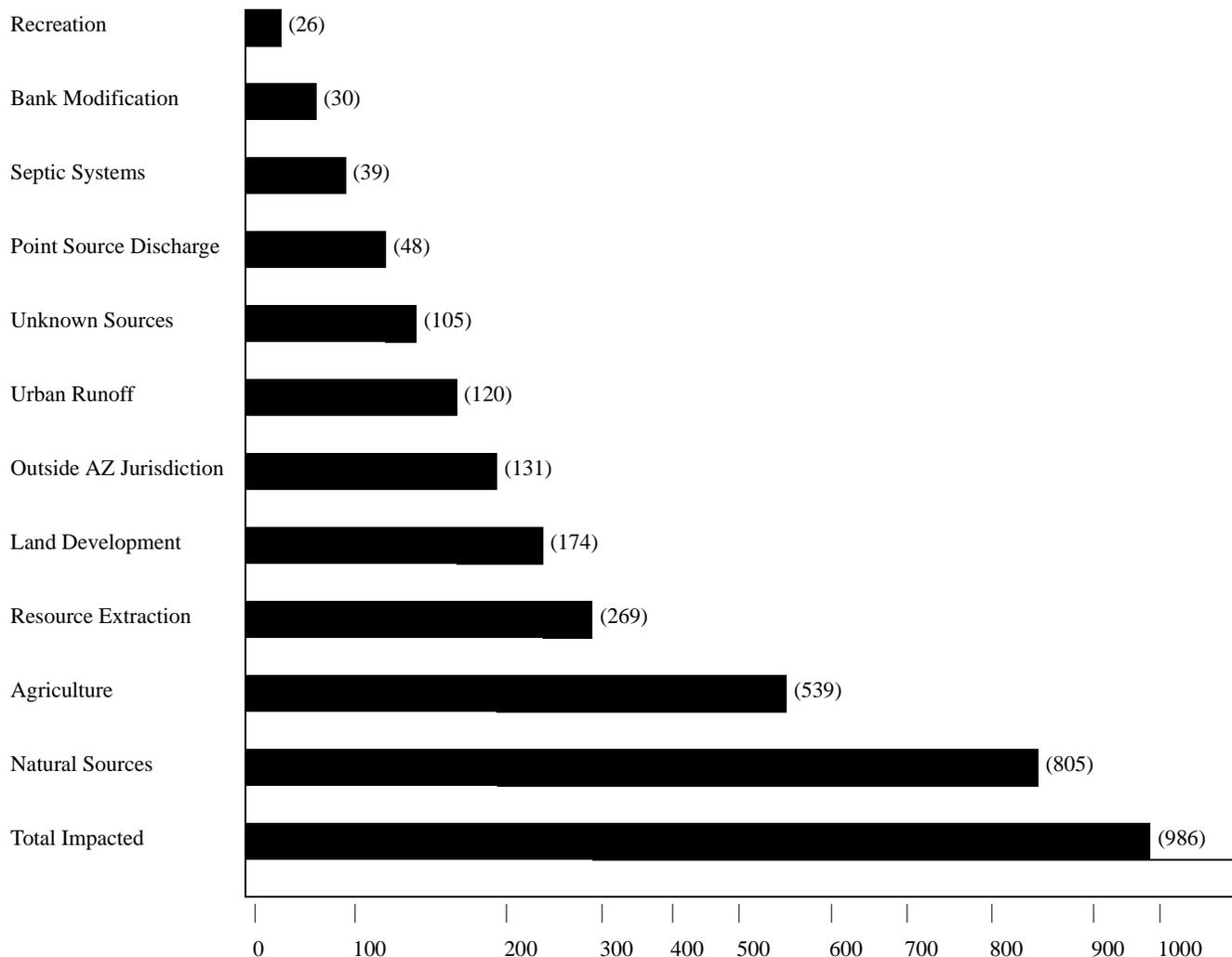
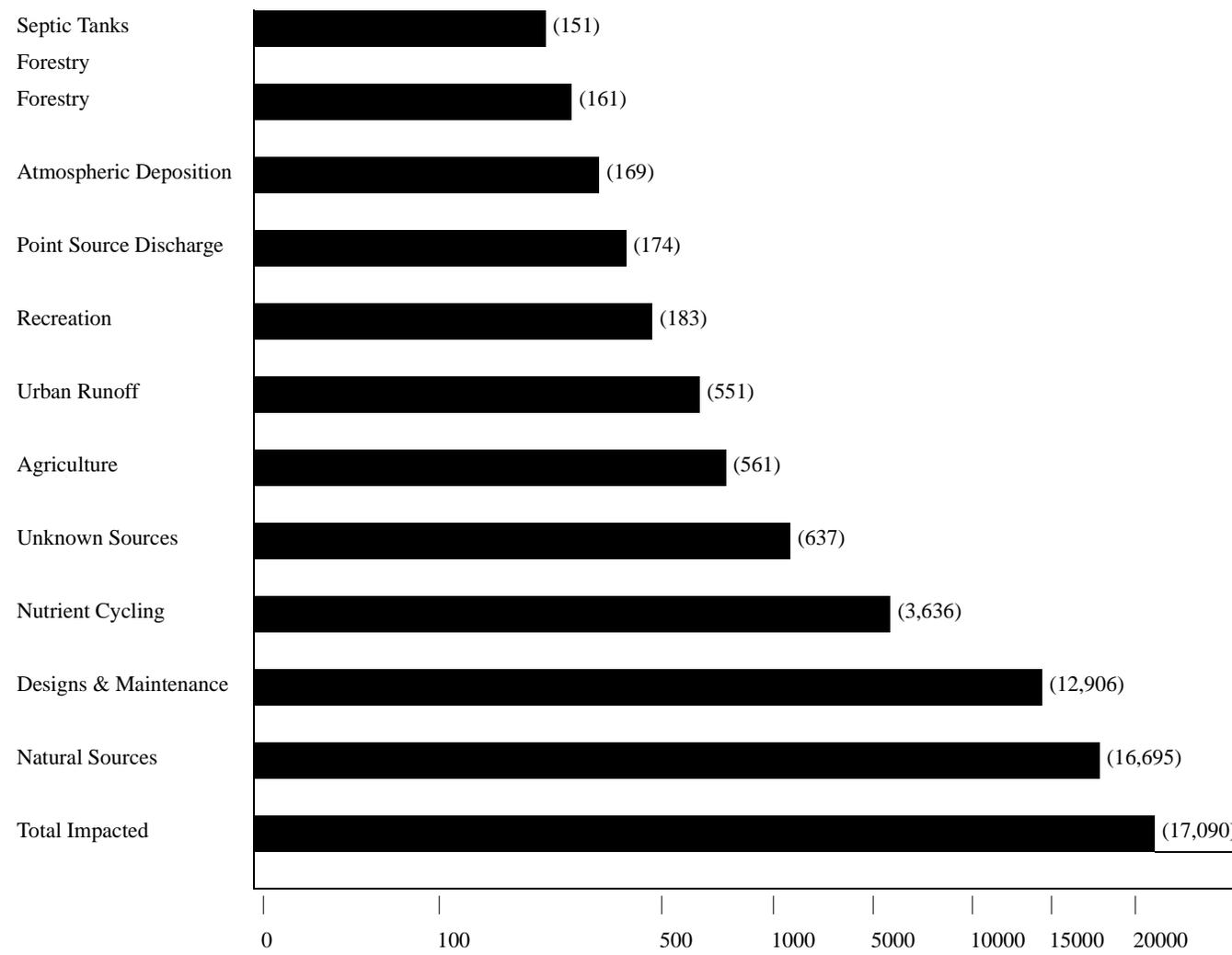


Figure 4. Probable Sources of Stressors in Lakes



Certain pollutants in surface waters are due to *natural background* conditions. In many areas, Arizona's soils are highly erodible or have naturally elevated levels of certain metals. Both the assessment and listing processes have criteria that factor in certain aspects of natural background. The contribution of natural background conditions to a surface water's impairment is investigated during TMDL analysis on the listed water. If impairment is solely due to natural conditions, it is not a violation of surface water standards and the water can be delisted.

Excessive *nutrient loading* and *internal nutrient cycling* are problems in Arizona's lakes. Sources of nutrients include irrigated agriculture, gardening practices, and urban and suburban property development. These nutrients cause algae and other aquatic plants to grow in lakes and deprive aquatic life of vital oxygen. Algae and vegetation growth can make lakes unusable for recreation. The *design and maintenance* of man-made lakes or reservoirs can contribute to impairment. The physical characteristics of the lake, such as depth, volume, and flushing rate must be balanced with natural sediment inputs and trophic conditions.

Agriculture, both grazing and crop production, are a probable source of stressors such as turbidity, boron, selenium, nutrients, fecal coliform, and pesticides. Since grazing remains a predominant land use by total acreage in Arizona, it is frequently indicated as a probable source of sediment loading and other pollutants to streams and lakes.

Resource extraction is a major source of metals and low pH. Mining occurs in areas where metal ores are naturally present in rock and in placer deposits, therefore, a portion of the loading is natural background conditions. The activities involved in the resource extraction can contribute other stressors to streams and lakes such as total dissolved solids, turbidity, and metals.

Arizona's TMDL Program

Arizona has completed 22 TMDLs since 1998 and 52 other TMDLs are in various stages of development. Restoration efforts have begun on several of the completed reaches. Restoration or remediation efforts by other entities may change the target date for other TMDLs.

A.R.S. Title 49, Chapter 2, Article 2.1, effective July 18, 2001, establishes the process by which the Department implements the TMDL program and addresses polluted surface waters through the identification of impaired waters, the development of TMDLs, and the implementation of a TMDL reduction program. Key provisions of the program require the state to:

1. Prepare a list of impaired waters at least once every five years to comply with the requirements of section 303(d) of the CWA;
2. Consider only reasonably current, credible and scientifically defensible data to determine whether a surface water is impaired;
3. Adopt rules describing the methodology used to identify impaired surface waters, including assessment criteria and statistical or modeling methodologies for identifying impairment; criteria for data to be considered current, credible, and scientifically defensible; implementation procedures for determining impairment based on a narrative or biological criterion; criteria for removing a surface water from the 303(d) List; and factors to prioritize listed surface waters for TMDL development;
4. Include a priority ranking of the impaired waters for TMDL development for each new 303(d) List. The first list submitted under this rulemaking (due to EPA on April 1, 2002) must contain a schedule sufficient to ensure that all required TMDLs will be developed with 15 years from the date EPA approves the list. Surface waters, included for the first time on subsequent lists, will have TMDLs developed within 15 years from the date of initial listing.
5. Develop TMDLs using statistical and modeling techniques that are validated and broadly accepted by the scientific community; and establish TMDLs to meet applicable surface water quality standards, including a reasonable margin of safety, taking into account variables related to the type of surface water, unknowns regarding relationships between effluent limitations, and water quality and seasonality;
6. Establish an implementation plan for each TMDL that explains how the allocations and reductions in existing pollutant loadings are achieved and specify the time-frame for which compliance with surface water quality standards is expected; and
7. Provide multiple opportunities for public notice and public comment on the following and provide response to comments before submittal to EPA:
 - a. Initial and final draft listings;
 - b. Draft pollutant loadings and allocations among the contributing sources; and
 - c. Implementation plans.

303(d) Listing Process

Impaired waters that are not attaining their beneficial uses are identified during the biennial development of the 303(d) List. This rulemaking identifies the Department's approach for identifying and listing impaired surface waters and for prioritizing impaired waters for TMDL development. Placement of surface waters on the 303(d) List must be supported by sufficient credible data to ensure that the listings are justified.

R18-11-602. Credible Data

The Department will consider only reasonably current, credible, and scientifically defensible data to determine whether a surface water is impaired. The credible data requirements apply when the Department conducts water quality assessments and when monitoring entities (including the Department, municipalities, industry, volunteers, and federal and state land management agencies), develop monitoring programs to collect and prepare data for the listing and TMDL development.

The Department begins the 303(d) listing process by seeking all existing and readily available surface water quality data and information collected from sources, including federal and state agencies (including EPA's STORET database), other programs within the Department, tribes, local governments, watershed councils, private and public organizations, volunteer monitoring groups, and private individuals. The data may include chemical, physical, benthic, habitat or toxicity testing data collected from a variety of sources such as fixed-stations, intensive surveys, or other types of field investigations.

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Data is considered credible and relevant if the data submitted meets the minimum quality assurance requirements. The monitoring entity must:

- Develop a Quality Assurance Plan (QAP) that includes the methods used for sample collection, and field and laboratory analysis, and assurance that field and laboratory personnel are adequately trained and supervised;
- Develop a site-specific or project-specific Sampling and Analysis Plan (SAP) containing specific elements, including sampling locations, analytical methods references, and quality assurance/quality control provisions that assure that samples are spatially and temporally representative of the surface water conditions within the targeted segment and at the time;
- Ensure that data collection, preservation, and analytical procedures are those established in A.A.C. R9-14-610 which includes EPA methods, American Public Health Association *Standard Methods*, U.S.G.S. methods, and ASTM methods;
- Ensure that laboratory analyses are performed by a state-licensed laboratory, a laboratory exempted by the Arizona Department of Health Services for specific analyses, under A.R.S. § 36-495.02, or a federal or academic laboratory that can demonstrate proper quality assurance/quality control equal to the requirements for state licensure;
- Provide other information necessary to assist the Department in interpreting or validating the data; and
- Maintain records for the duration of the listing cycle, or if a listing is made based on the data, maintain the records for the duration of the listing.

The Department is responsible for reviewing all data to make sure it meets specified minimum quality assurance requirements, including reviewing the adequacy of the QAP and SAP for the type of sampling undertaken. Quality assurance requirements must be met for all data used as a basis to support a listing, or to show cause why a surface water or segment should not be listed. Quality assurance requirements also apply to data submitted during the public review process in response to draft listings. Guidance for preparing both QAPs and SAPs are available on the Department's web site at <http://www.adeq.state.az.us/environ/water/assess/tmdl.html> and from EPA documents such as:

1. *EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations*, EPA QA/R-5, November 1999 (interim final);
2. *The Volunteer Monitor's Guide to Quality Assurance Project Plans*, USEPA, EPA 841-B-96-003, September 1996; and
3. *Sampling and Analysis Plan Guidance*, prepared by Quality Assurance Program, EPA Region IX, March 1997.

The rationale for the specificity of the credible data requirements is twofold. The water quality assessment and impaired waters identification process are reliant on having sufficient data both in terms of quantity and quality. Listing decisions not supported by sufficient data are potentially flawed. An incorrect finding that a segment is not impaired allows a potential human health threat or environmental degradation to go unrecognized. Incorrectly placing a segment on the 303(d) List results in the unnecessary expenditure of public resources. It is important that data used for listing decisions is credible. The concept of credible data ensures that only those surface waters for which adequate documentation of standards non-attainment is or will be occurring are included on the 303(d) List.

Secondly, clearly defined requirements "level the playing field" and serve to allay concerns by other monitoring entities as to the quality and adequacy of other monitoring programs. The Department collects much of the water quality data used in these processes but also relies on other monitoring entities such as the U.S. Geological Survey, Salt River Project, and municipalities to assist in data collection. Across the country, volunteers in watershed groups and other organizations are monitoring the condition of streams, rivers, and lakes. The number and variety of these projects are on the rise as is the complexity of the projects and the uses of the data collected. One of the most difficult issues facing volunteer environmental monitoring programs, in particular, is data credibility. Potential users are often skeptical of volunteer data – what were the goals of the project, how were the volunteers trained, how were the samples collected, handled, and stored, and how was the data analyzed and reported? A key tool in breaking down this barrier is through the proper preparation and execution of the quality assurance and sampling and analysis plans. The Department will provide clear direction in the form of EPA guidance documents and example QAPs and SAP, which will be available on the Department's web site. Lastly, the plans must be submitted to the Department for reference to ensure that data used in assessment, impaired waters identification, and TMDL development meets the test of credible data.

R18-11-603. General Data Interpretation Requirements

Once data is determined credible, the Department will apply the following guidance where applicable for data interpretation.

Method Detection Levels

Often individual sample results from monitoring efforts are reported as “less than the *method detection limit*.” The method detection limit or MDL is the minimum concentration of an analyte that can be detected using that analytical procedure with 99% confidence that the analyte concentration is greater than zero. In cases where measurement data is described as “less than the MDL” or “nondetects,” the actual concentration of the chemical is unknown although it lies somewhere between zero and the method detection limit. How to evaluate these unknown quantities and when they should be used in statistical analyses are questions that arise in both assessment and listing decisions. An important variation of this question is how to treat this data when the water quality standard is below the MDL. The fact that many of the values are reported as nondetects is noteworthy, in that, it indicates the levels are generally below a level of concern. However, there is no standardized way to determine the true value for these individual nondetect values.

Surface water quality standards, especially those to protect the aquatic and wildlife or fish consumption designated uses, are often set at very low levels. When the MDL is at or below the standard, the actual measurement result reported as “less than the MDL” will either equal the standard or be less than the standard. In either case, there is no exceedance. (See example #1 below.)

When the MDL is above the standard and the measurement result is reported as “less than the MDL,” there is a gray area in terms of knowing whether the sample is meeting or exceeding the standard. What is known is that there is a 99% confidence that the pollutant concentration is greater than zero but the actual value may be anything from zero to the MDL. The area between the standard and the MDL is the gray zone. (See example #2 below.) The result may or may not be exceeding the standard. In the third example, the measurement result is clearly in exceedance of the standard and would be evaluated at the stated value.

Concentration Scale	MDL Example #1	MDL Example #2	MDL Example #3
8			
7			
6		Method Detection Limit	Resultant Value
5	Water Quality Standard		Method Detection Limit
4			Water Quality Standard
3	Method Detection Limit	Water Quality Standard	
2			
1			
0			

How the Department deals with MDLs varies depending on the situation (examples #1-3 above). In an effort to reduce the number of samples where the MDL is greater than the standard (example #2), the monitoring entity must choose or specify that the laboratory use an approved analytical method with the method detection limit that is less than or equal to the applicable surface water quality standard. If an analytical method is not available, the laboratory must use the method with the lowest MDL. This is consistent with EPA Region IX guidance for NPDES permits issued in Arizona.

When the data is reported as “less than the method detection limit,” there are two possible paths.

1. Where the analytical method chosen complies with the requirements outlined above, the Department shall:
 - a. Consider the measurement result as meeting the surface water quality standard; and

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- b. Use appropriate statistical tests, based on the percentage of “less than” values in the dataset, to evaluate the measurement result, before using it in developing statistics, trend analyses, or TMDL development; or
 - c. Consider the measurement result equal to the MDL in developing statistics, trend analyses, or TMDL development.
2. Where the analytical method chosen does not comply with the requirement outlined above, for example the method chosen does not have the lowest MDL but has, in fact, an MDL considerably greater than the water quality standard, the Department must set the result equal to the MDL when determining whether the sample meets or exceeds the water quality standard or in calculating statistics, or developing trend analyses, or TMDLs.

In the first case, the choice of appropriate statistical tests depends on the percentage of values in the dataset that are reported as below the MDL. When a small percentage of values are reported as below the detection limit, replacing the nondetects with MDL/2, MDL, or a small number, may be satisfactory. When a moderate or large percent of the values are nondetects, a more detailed analysis is appropriate or a substitution of the MDL as the value is a conservative, alternate approach. This is done to include as many individual data points in the analysis as possible and will indicate the level of monitoring effort. In addition to the percentage of samples below detection limits, sample size will also influence the procedures used to evaluate the data. Cases where one sample out of four is a nondetect should be treated differently than where 25 samples out of 100 are nondetects. This information is only provided as guidance and must be exercised with good judgement. A good reference on assessing data quality criteria and performance specifications is EPA’s “*Guidance for Data Quality Assessment: Practical Methods for Data Analysis*,” EPA QA/G-9, EPA/600/R-96/084, July 1996.

Field Equipment Specifications

Several water quality parameters have very short holding times for analysis or give a more accurate representation of conditions if measured in the field. These parameters include dissolved oxygen, pH, turbidity, and temperature. Studies document a wide range of error associated in taking field measurements under natural conditions. Errors can be introduced depending on instrument selection, calibration method, placement of the instrument in the stream, or opacity of the instrument case such as clear versus opaque. Some of these errors are addressed through quality assurance/quality control procedures but others are inherent in the variations in natural systems.

Most aquatic organisms can tolerate or adapt to small fluctuations, over short periods of time, for conventional water quality parameters without deleterious effects. When a field sample measurement is within the *manufacturer’s specification for accuracy*, the result meets the surface water quality standard. For each listing cycle or for TMDL development, the Department will identify field equipment specifications. For the 2002 listing cycle, pH is ± 0.2 standard units, dissolved oxygen is ± 0.2 mg/l, and turbidity is ± 2 NTU.

Invalid Data

Invalid data is excluded when identifying impaired waters or for TMDL development. Invalid data includes results outside the range of possible physical or chemical measurements for the parameter or equipment, data transcription or laboratory errors, or statistical outliers, verified through statistical analysis, as invalid measures of water quality.

Data Conflicts

To resolve *potential data conflicts*, the Department will consider the age of the data, the accuracy and reliability of the monitoring methods and procedures, the amount of data, or frequency of data collection. Generally, newer results are considered over older data unless the older data is more representative of critical flow conditions, more frequent data collection favored over nominal datasets, and results from more rigorous methods or procedures are weighted over less precise methods or procedures.

Statistical Tests and Modeling

The Department will employ *fundamental statistical tests or modeling*, appropriate for the collected data and type of surface water, in an impaired waters identification or TMDL decision. The Department currently only uses basic descriptive statistical tests, including the measure of central tendency such as arithmetic mean, geometric mean, median, or mode of a dataset when evaluating whether samples meet or exceed a surface water quality standard. However, as more data is collected as part of the statewide network of monitoring stations, the Department will begin evaluating trends in water quality at specific locations. A.R.S. § 49-232 requires that the Department use methods of

sampling and analysis, including statistical and modeling techniques, that are generally accepted and validated in the scientific community as appropriate for assessing the condition of the given surface water.

R18-11-604. Criteria for Identifying Surface Water as Impaired or Making a TMDL Decision

This Section identifies the process the Department uses to determine if a surface water is impaired, and if impaired, whether to place it on the 303(d) List. The process incorporates the ability to evaluate an exceedance of a numeric and/or narrative water quality standard in the context of the setting, time of year, and beneficial uses to determine if the exceedance has a true negative effect on water quality and is a violation of water quality standards. Not all criteria exceedances result in a surface water being identified as impaired. Certain situations are specified in the rule as non-applicable to determining impairment including:

- Surface waters where water quality criteria is exceeded solely due to naturally occurring conditions;
- Surface waters where temporary exceedances may be due to activities performed by certain state or federal agencies that are exempted in the standards, such as releases from dams, and dredging of urban lakes;
- An exceedance based on data from a spill event, an upset or bypass from a known source, or an end-of-pipe NPDES or AZPDES permit violation, any of which are subject to enforcement or remediation by the Department of EPA; or
- Samples collected within any regulatory mixing zone, collected under the terms of a nutrient waiver or variance established in an NPDES or AZPDES for a specific parameter where the result may exceed water quality standards but does not exceed the permitted discharge limitation.

Water quality conditions vary from place to place (spatial) and from time to time (temporal). This occurs because factors such as geology, vegetation, elevation, and climate control natural or ambient water quality changes. In response to these changes, macroinvertebrates, fish, and algae evolve with different life histories, physiologies, and mobilities. These reasons, and the knowledge of how water quality standards are developed, mean that not every standard exceedance automatically constitutes a violation or is indicative of impairment.

A.R.S. § 49-232(B) requires that the Department consider only “reasonably current, credible, and scientifically defensible data” in identifying a surface water as impaired or in any TMDL decision including prioritizing an impaired water for TMDL development, developing the TMDL, or developing a TMDL implementation plan. “Credible and scientifically defensible data” is defined as data that was collected, submitted, and analyzed according to the four factors listed below.

1. Quality assurance and quality control procedures;
2. Samples or analyses representative of water quality conditions at the time the data was collected;
3. Data consisting of an adequate number of samples based on the nature of the water in question and the parameters being analyzed; and
4. Methods of sampling and analyses, including analytical, statistical, and modeling methods that are generally accepted and validated in the scientific community as appropriate for use in assessing the condition of the water.

The impaired water identification process must ensure that the data is sufficient and credible for evaluating whether a surface water should be added to or removed from the 303(d) List. The steps outlined in this process are not intended or designed for use in determining compliance with permits for enforcement purposes, as these activities often require additional information. The process ensures that beneficial use-support determinations are made with a reasonable level of confidence. In the dynamic field of water quality assessment, methods and standards change as do factors affecting surface waters.

An additional feature of the listing process is the Targeted Monitoring List. Surface waters for which information suggests impairment, but where documentation does not meet the requirements for listing under this rule, may be assigned to the Targeted Monitoring List. For example, where there are an insufficient number of samples for evaluation or the data shows one or more exceedances but less than the number of exceedances required to find impairment. The Department may place surface waters or segments on the Targeted Monitoring List in other instances where technical, regulatory, or statutory issues preclude a decision to place a segment on the 303(d) List. Lastly, segments or stressors that are removed from the 303(d) List because a TMDL is approved by EPA, may be placed on the Targeted Monitoring List for follow-up monitoring to determine the effectiveness of the pollutant load allocations and the implementation plan in bringing water quality back to meeting standards. Creation of the targeted list is another step towards assuring surface waters are not placed on the 303(d) List until sufficient data is available that indicates a violation of a water quality standard.

Weight of Evidence Approach

Surface waters are included on the 303(d) List based on an evaluation of multiple indicators of water quality including biological, physical, and chemical data that demonstrate non-attainment of numeric or narrative standards, use impairment, or a declining trend in water quality or the health of the biotic community. The Department uses a “weight-of-evidence” approach to assessments and listing, where the strengths and limitations of each dataset are weighed and considered. A surface water is not, by default, impaired because one dataset indicates possible impairment, but the other dataset shows it attaining its uses. In this approach, the Department looks at all the numeric and narrative data and other relevant information when making its determination whether the exceedance results in an impairment that is recurring, persistent, or seasonal in nature. Other relevant information includes the role of soil, geology, hydrology, flow regime, natural processes, anthropogenic influences, the characteristics of the stressor, the age of the data, how it was collected, and climatic conditions at the time of sampling.

A.R.S. § 49-232(E) requires that a surface water may not be listed, based on biological or narrative criteria without the development and adoption, by the Department, of a narrative implementation guidance for the specific criteria. Concurrent with this rulemaking, the Department is adopting the “*Narrative Toxicity Standard 303(d) Program Implementation Procedures*,” which outline the procedures for developing and issuing fish consumption advisories in this state in support of the narrative toxics standard. The Department will conduct a separate stakeholder and rule-making effort to develop the remaining narrative standards implementation guidances after the formal adoption of this rule. A.R.S. § 49-232(E) also states that the Department shall not list a surface water, based upon the evidence of a narrative standard exceedance in the absence of accompanying chemical data to support the finding, unless the evidence indicates that the numeric standard is insufficient to protect the surface water and the Department provides the scientific basis for the determination of use impairment.

Based on this weight-of-evidence approach, if the Department determines that a surface water or portion of a surface water is impaired, the surface water and the identified stressor is placed on the 303(d) List. Rivers and streams are listed according to the water segments identified in EPA’s Reach File System based on the U.S. Geological Survey 8-digit Hydrologic Unit Codes, unless the data or additional data is sufficient to further segment the impaired reach. Lakes and reservoirs are generally not segmented. The US Geological Survey has divided streams across the United States into drainage areas known as Hydrologic Unit Codes. EPA then divided the streams into “reaches” based on hydrological features such as tributaries and dams, and provided a unique number for each stream reach. These numbers eliminate the ambiguity caused by many streams in Arizona having the same common name (e.g., Sycamore Creek). Where the designated uses or water quality standards on a reach change, the Department may further subdivide the reach.

Evaluation of Impairment based on Numeric Water Quality Standards

All data used in evaluating whether a surface water is impaired, based on numeric water quality standards, must meet the credible data requirements in R18-11-602. Before assessing whether a surface water is meeting numeric standards, the Department must determine if there are a sufficient number of samples and whether those samples are spatially and temporally representative of the water quality in that surface water. If there is an insufficient number of samples or the number of samples are not representative, the water is placed on the Targeted Monitoring List for further monitoring.

Sufficiency of spatial coverage takes into account the distribution of monitoring locations on the surface water, sources of pollution, and influences of tributaries or other significant hydrologic or hydrographic features. Samples are considered “spatially independent” if data is collected from stations or locations located more than 200 meters (~0.1 miles) apart or if the data is collected less than 200 meters apart to characterize the effect of an intervening tributary, outfall, pollution source, or significant hydrographic or hydrologic change. Unless there is sufficient data developed during initial data collection or through targeted monitoring to further delimit the extent of impairment, the data is used to characterize an entire reach or lake. The Department will consider the spatial extent of the evaluation as representative of an entire lake when the same factors mentioned above are considered. Arms or portions of a lake are treated separately if there is sufficient evidence of differing influence.

Available data is evaluated to ensure that there is an avoidance of temporal bias, and to ensure that seasonality, where applicable, is represented in the sampling scheme. Samples are considered “temporally independent” if they are collected at the same station or location more than seven days apart. For the purposes of assessment and evaluation of impairment, information and data should be no older than five years. Older data may be used on a case-by-case basis if conditions have not changed and the older data is still representative, or the older data is used with newer data to demonstrate water quality trends. If used for listing, the Department will include an explanation as to why this older data continues to reflect current water quality conditions. Major mitigation or remediation efforts will be considered

during evaluation, where some waters may be assessed based only on data collected after the mitigation actions are implemented.

For data that is not spatially or temporally independent or for multiple depth samples at a single location in a lake, the measurements must be aggregated and represented by a single resultant value. The proper representative measure, either the mean of the dataset or the maximum value, is determined based on the type of water quality criteria or standard as follows:

Measure of central tendency for the dataset is used to evaluate an exceedance of the following criteria:

- Human health and agricultural uses, except for nitrate and nitrate/nitrite (18 A.A.C. 11, Article 1, Appendix A, Table 1);
- Four-day mean chronic criteria (18 A.A.C. 11, Article 1, Appendix A, Table 2);
- Any pollutant expressed as an annual or 30-day geometric mean (the specific number of samples necessary to evaluate either of these is expressly defined in A.A.C. R18-11-101);
- Single sample criteria for temperature, turbidity, nitrogen and phosphorus (A.A.C. R18-11-109 and R18-11-112);
- Radiochemicals (A.A.C. R18-11-109(I)(2)); and
- All single sample criteria for “unique waters,” except chromium (A.A.C. R18-11-112).

The maximum value or “worst case” value of the dataset shall be used to evaluate an exceedance of the following criteria:

- Acute criteria (18 A.A.C. 11, Article 1, Appendix A, Table 2);
- Nitrate or nitrate/nitrite (18 A.A.C. 11, Article 1, Appendix A, Table 1);
- Acute criteria for “unique waters” (A.A.C. R18-11-112);
- Single sample maximum criteria for bacteria (A.A.C. R18-11-109(B));
- 90th percentile criterion for nitrogen and phosphorus (A.A.C. R18-11-109(H) and R18-11-112) (The specific number of samples necessary to evaluate these criteria are expressly defined in A.A.C. R18-11-101);
- For dissolved oxygen measurements, the “worst case” value is the minimum value;
- For pH measurements, the “worst case” value means both the minimum and maximum value of the dataset.

Except as noted below, a minimum of ten spatially independent samples is necessary to evaluate a surface water for possible impairment. For perennial surface waters, the ten independent samples must be collected over three or more sampling events separated by at least seven days. If the impairment is seasonal in nature, the samples must be sufficient to demonstrate seasonal impact. For ephemeral or intermittent surface waters, the ten independent samples must be collected over two or more sampling events separated by at least seven days. Surface waters where datasets are comprised of less than three samples are placed on the Targeted Monitoring List for further sampling. Waters where exceedances have occurred but datasets comprise three to ten samples the monitoring site is placed on the Targeted Monitoring List except in special cases noted below.

Evaluation of Numeric Standard Exceedances

When there are ten or more samples, possible impairment exists if the number of exceedances of an applicable surface water quality standard is greater than or equal to the number listed in R18-11-604, Table 1, based on the sample size. Table 1 starts with three exceedances based on a minimum sample size of 10. Table 1 is based on a binomial distribution that determines at a 90% confidence level that the actual frequency of standards exceedance is greater than or equal to 10%.

Table 1 is based on tables developed by the Florida Department of Environmental Protection in support of Florida’s June 2001, 303(d) listing rule. Florida adopted a nonparametric procedure for identifying impaired surface waters based on guidance provided by EPA, which recommends a “greater than 10% exceedance percentage” for determining that waters only partially meet their designated uses for aquatic life use support (USEPA “*Guidelines for Deriving Numerical Natural Water Quality Criteria for the Protection of Aquatic Organisms and their Uses*,” NTIS PB85-227049). Florida developed a listing and delisting methodology for impaired waters based on the binomial distribu-

tion theory and the premise that a surface water is listed if its true exceedance probability for a pollutant is greater than 10% (“*A Nonparametric Procedure for Listing and Delisting Impaired Water based on Criterion Exceedances*,” Lin, Meeter and Nui, October 2000). The decision to list is based on a minimum number of exceedances found in *n* sample measurements. The study further addresses the issues of sampling size and spatial and temporal coverage of those samples.

Because of limited data and limited resources to obtain needed monitoring data, Arizona, like Florida, currently has a relatively small dataset on many of our surface waters. Stakeholders have expressed concern with the large uncertainty inherent in small sampling sizes when trying to estimate true exceedance probabilities for a pollutant. The Florida study established ten samples as the minimum dataset for assessing impairment based on standards exceedances. Because concentration levels of many pollutants vary depending on spatial location, season, and time of day, the Florida study recommended that sample measurements be collected randomly and at reasonably separate locations across a surface water. Samples must be collected with sufficient temporal separation to ensure independence. Following these guidelines will help ensure the samples are independent and unbiased.

Notwithstanding this nonparametric approach to determining impairment, evidence of possible impairment of a surface water may be determined when there are less than 10 samples, in any of the following situations:

- A surface water quality standard, based on lifetime or long-term exposures, including radiochemicals, agricultural criteria, field parameters, bacteria and all human health criteria except nitrate and nitrate/nitrite, is exceeded in three or more temporally independent samples during the established monitoring period;
- Any of the following surface water quality standards with potentially acute or toxic impacts are exceeded more than once in any consecutive three-year period during the established monitoring period:
 - Acute surface water quality standards;
 - Nitrate or nitrate/nitrate standards; or
 - Single sample maximum standards for bacteria.
- More than one exceedance of an annual mean, 90th percentile, 30-day geometric mean, or 4-day mean chronic criteria within the established monitoring period. To evaluate based on one of these standards requires a minimum number of samples taken within a specific time-frame. These criteria are defined in the definition of the specific type of standard in A.A.C. R18-11-101. For example, evaluation of an “annual mean” standard requires the Department to have sufficient credible data to develop an arithmetic mean of monthly values determined over a consecutive 12-month period, provided “monthly values” are available for at least three months. The “monthly value” is the arithmetic mean of all values determined in a calendar month. Calculation of an arithmetic mean for the calendar month requires at least two, and preferably three or more individual data points.

Any evidence of possible impairment based on exceedance of numeric standards is used with other information, in the weight-of-evidence determination of actual impairment.

Evaluation of Impairment based on Narrative Water Quality Standards

In addition to numeric criteria, designated uses are protected by narrative criteria which state that a surface water shall be “free from” pollutants, alone or in combination with other pollutants, that cause floating debris or suspended solids; settleable solids such as bottom deposits; odor, oil, or grease; off-taste; color present in the water beyond natural background levels; the growth of algae or aquatic plants that impairs an existing, or attainable designated use; or that are toxic to humans, aquatic life, or wildlife.

Information about support or nonsupport of narrative criteria may consist of water quality studies, biological data, existence of fish kills, fish tissue samples, photographic evidence, local knowledge, and best professional judgement. The analysis and determination of narrative criteria support is inherently less objective and consistent than that for numeric criteria and often use associated numeric data where it exists and is applicable; for example, excessive aquatic plant growth associated with instream nutrient concentrations.

A.R.S. § 49-232(F) requires the development and adoption of narrative implementation guidance documents for assessing and identifying impaired waters. Currently, the Department has developed a guidance document for the application of the toxics narrative standard through the use of fish consumption advisories. Additional guidance documents are being developed for this and other narrative standards, including the use of the narrative bottom deposits standard in wadeable, perennial streams and narrative nutrient standards. A separate stakeholder process and rule-making will be conducted to develop and finalize these documents.

Arizona Administrative Register
Notices of Proposed Rulemaking

The Department follows EPA guidance in developing screening levels for determining the concentration of toxicants in fish tissue. The implementation guidance clearly outlines the procedures and assumptions used to calculate allowable fish tissue concentrations.

NONCARCINOGENS	CARCINOGENS
$RTC = \frac{RfD \times BW}{CR}$	$RTC = \frac{(ARL)(OSF) * BW}{CR}$
<p>–RTC means reference tissue concentration (mg of toxicant/kg of fish tissue), which is the allowable concentration of the toxicant in edible fish tissue.</p> <p>–RfD means reference dose (mg of toxicant/kg of human body weight/day), which is the allowable exposure of the toxicant (through ingestion of fish) on a daily basis. Reference doses are obtained from the EPA Integrated Risk Information System (IRIS), which is an updated computer database for assessing human health effects of toxicants, or may be specifically developed using EPA methodology.</p> <p>–BW means the average body weight for the most vulnerable portion of the potentially affected population, for example, children or pregnant women.</p> <p>–CR means consumption ratio, which is the average amount of fish consumed per person (as kg of fish per day).</p> <p>–ARL means the risk level for carcinogens (for example, 1/100,000; 1/1,000,000). This is the potential risk of cancer for each person exposed at the allowable dose over a 70-year period.</p> <p>–OSF means the oral cancer potency slope factor, which is the relationship (slope) of the cancer risk to dose.</p>	

The Department shall consider as evidence of possible impairment, exceedances of the narrative toxicity standard, based on the issuance of a fish consumption advisory using screening levels developed in accordance with the implementation procedures. The Department does not actually issue fish consumption advisories. This is the responsibility of the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service. These agencies work closely with the Department to develop the evidence necessary to issue an advisory.

An EPA letter dated October 24, 2000, from Geoffrey H. Grubbs, Office of Science and Technology and Robert H. Waylands II, Office of Wetlands, Oceans, and Watersheds, states that fish and shellfish advisories should be used as sources of data to determine whether to list certain waters as impaired. A distinction is made between advisories issued based on real water quality or fish tissue data and those advisories issued merely as a precautionary tool. If the advisory is based on water quality data from a specific surface water, the surface water should be listed. If the advisory is based on regional water quality data and the advisory is precautionary, the data may be used as evidence but should not be used as a sole basis for listing.

EPA has faced opposition to this guidance in the past, where groups have maintained that numeric water quality criteria provide a scientifically defensible method for determining whether water quality standards are being met. In response, EPA held that a surface water can meet numeric ambient water quality criteria but not attain the designated uses because fish tissue concentrations exceed levels that are protective of human health. In these instances, where tissue concentrations indicate an impairment of the designated use, even though ambient water column concentrations of the pollutants do not indicate an exceedance, EPA recommends that states translate the applicable narrative criteria on a site-specific basis or adopt site-specific criteria to account for the expected exposures. The federal guidance and the Department’s implementation procedures clearly articulate those situations where use of advisories should be considered as “readily available data and information” and used in the evaluation.

Any evidence of possible impairment based on an exceedance of a narrative standard is then used, with other information, in the weight-of-evidence determination of actual impairment.

R18-11-605. Removing a Stressor or Surface Water from the 303(d) List

In general, removing a surface water or stressor from the 303(d) List is subject to the same requirements used in the listing decision. A.R.S. § 49-232(C)(4) requires that the criteria for delisting can be no more stringent than the criteria for listing.

A surface water or stressor may be removed from the list when there is evidence that:

- The surface water is meeting water quality standards;

- It is violating water quality standards due only to natural conditions (meaning that there is no human-caused influence);
- A TMDL has been approved for the surface water or the stressor; or
- The surface water or stressor was placed on the list in error.

40 CFR 130.7(b)(6)(iv) requires states to demonstrate good cause for not including surface waters on the 303(d) List or for removing a stressor or a surface water from the List. Evidence of good cause includes more recent or more accurate data showing that the surface water is meeting the appropriate surface water quality standard and/or the designated uses are being attained. Considerations to support delisting include more recent and accurate data, more sophisticated water quality modeling, identification of flaws in the original analysis that led to the surface water being listed, changes in conditions such as new control equipment or the elimination of a discharge, or changes in water quality standards, guidance, or policy.

When collecting more recent data, the conditions such as sampling frequency, number of sampling events, and hydrologic or climatic conditions, should be similar to conditions occurring when the samples were taken, if those conditions still exist, indicating impairment and resulting in a listing decision. For example, if a listing was based on two successive years of an annual mean standard not being met, the Department will look for at least two successive years of data indicating that the standard is now being met.

Surface waters or stressors can be excluded or delisted from the 303(d) list in either of the following situations:

- The Department has developed, and EPA has approved, a TMDL for the stressor or the surface water. A surface water that is delisted after development of a TMDL will be placed on the Targeted Monitoring List for followup monitoring to determine if the implementation strategies are effective and whether the TMDL allocations are satisfactory. The surface water may be added back to the 303(d) List if implementation strategies fail to eliminate the problem or if recommended strategies do not occur and the water quality remains impaired.
- A surface water was placed on the 303(d) List based on standard violations caused solely by natural conditions with no human caused influences. The “natural background” provision of the state water quality standards (A.A.C. R18-11-119) specifies that where a pollutant exceeds a standard and the exceedance is solely due to naturally-occurring conditions and not caused by human activity or anthropogenic sources, the exceedance is not considered a violation. A.R.S. § 49-232(D) specifies that a surface water shall not be listed where the standard is exceeded solely due to naturally-occurring conditions. The rationale for removal of a surface water or to exclude it from listing based on naturally occurring conditions must be sufficiently documented.

For example, waters that exceeded water quality standards but drained wilderness or similar areas, would meet the definition for natural background if it were well documented by the appropriate land management agency that there were no contributing human influences or activities. These waters could be removed or excluded from the list due to natural background provision provided this judgment was documented by the land management agency that no past or present human influences had or were occurring that might contribute to a water quality standard exceedance.

R18-11-606. TMDL Priority Criteria for 303(d) Listed Surface Waters

A.R.S. Title 49, Chapter 2, Article 2.1 and the CWA require the Department to prioritize listed surface waters for development of a TMDL. A.R.S. § 49-233 identifies 17 factors that must be used in the prioritization. The Department added six additional factors to develop high, medium, and low categories of prioritization. These categories take into account the severity of the impairment, the designated uses of the receiving water, the seriousness of the water quality problems, the value of the resource, and the risk to human health, aquatic life, and wildlife. Notwithstanding this ranking system, the Department provides an option to re-prioritize a surface water to take advantage of opportunities within a watershed such as restoration or remediation efforts, requests from other entities, or to capitalize on efficiencies and geographic practicalities by coordinating TMDL development with other activities.

Generally, impaired surface waters are given high priority if:

- The stressor poses a severe threat to the health and safety of humans, aquatic life, or wildlife;
- The surface water is classified as a “unique water” or contains a listed threatened or endangered species under the Endangered Species Act;
- A new or modified NPDES or AZPDES permit is sought on the surface water; or
- A delay could jeopardize the Department’s ability to gather sufficient credible data.

The rule identifies “high priority” waters as the surface waters the Department will target for TMDL development in Medium priority is given to surface waters that fail to meet more than one of its designated uses or the stressor exceeds more than one surface water quality standard. An impaired surface water may also be considered a medium priority based on the administrative needs of the Department, including TMDL and permitting schedules and basin priorities.

A ranking of low priority is given to impaired surface waters if:

- The surface water is an ephemeral water and the stressor is not a threat to the health and safety of humans, aquatic life, or wildlife, nor does it contribute to the impairment of a downstream perennial surface water;
- The stressor poses a low ecological or human health risk or there is insufficient data to identify the pollutant source;
- The surface water has been proposed for delisting;
- The Department proposes modification to the applicable designated use or surface water quality standards but the change has not yet been approved by EPA; or
- There are international or interstate coordination issues.

The Department will make an effort to facilitate intergovernmental cooperation between the state and adjoining states, federally recognized tribes in Arizona, and with Mexico regarding listing decisions and TMDL development. Whenever possible, the Department will make these listing and TMDL decisions by mutual agreement, through the sharing of information, clarification of issues, and discussion. Several of Arizona’s recognized tribes have independent authority for setting water quality standards and implementing CWA regulations on reservation lands. The Department will cooperate on a government-to-government basis regarding natural resources during the development of the 303(d) List, especially during data assessment and in developing responses to comments on the listing. Cooperation during other listing tasks, including joint gathering of data and public involvement may be negotiated.

Developing Total Maximum Daily Loads

A.R.S. Title 49, Chapter 2, Article 2.1 requires that in developing TMDLs for listed surface waters, the Department must comply with certain provisions, including using credible data that is representative of the type of water listed and the conditions by which the water was listed, and broadly accepted statistical and modeling techniques. During TMDL development, the Department must use, where available and applicable to the specific stressor, clean sample collection and analytical techniques when collecting additional data. Any sampling or monitoring components of a required TMDL implementation plan must also comply the credible data requirements. In developing TMDLs, the Department will use only statistical and modeling techniques that have been validated and broadly accepted by the scientific community. The modeling technique chosen may vary based on the type of surface water and the quantity and quality of available data provided it meets the credible data requirements.

6. A reference to any study that the agency relies on in its evaluation of or justification for the rule and where the public may obtain or review the study, all data underlying each study, any analysis of the study and other supporting material.

R18-11-604, Table 1, specifying the minimum number of samples exceeding the numeric standard, was derived from *A Nonparametric Procedure for Listing and Delisting Impaired Waters Based on Criterion Exceedances*, by Pi-Erh Lin, Duane Meeter and Xu-Feng Nui, October 2000. This study may be obtained from the Department, the Florida Department of Environmental Protection, 3900 Commonwealth Blvd. M.S. 49, Tallahassee, Florida 32399, Tallahassee, FL 32306-4330, or at <http://www8.myflorida.com/environment/learn/waterprograms/tmdl/pdf/supdocument.pdf>.

7. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

8. The preliminary summary of the economic, small business, and consumer impact:

These rules establish procedures by which data will be collected and analyzed to determine whether a surface water is impaired and should be placed on the 303(d) List. The rule does not set TMDLs, nor does it address particular surface waters. The rules also do not establish new water quality standards or criteria but instead clarify interpretation of existing standards. The costs for this rulemaking will fall primarily to the Department and affect only those agencies or entities that monitor state surface waters and choose to submit the data to the Department for use in assessing and in identifying impaired surface waters. The rules do not directly regulate businesses, farms, or any other sectors of the economy.

A. Estimated Costs and Benefits to the Department of Environmental Quality

These rules affect the Department's surface water quality monitoring and assessment programs. Based on stakeholder input, the Department reexamined how it collects, reviews and analyzes data for 303(d) listing purposes. The rules require the Department to formalize its process to assure that data used for the listing process is credible and relevant to an impaired waters identification or a TMDL decision and to develop a methodology for determining whether a surface water is impaired and should be placed on the 303(d) List.

The first step in developing a 303(d) List is compiling all readily available, existing data. The new rules require that the Department review data to ensure that it meets the credible data requirements (collected under an appropriately prepared QAP and SAP, for example). If questions arise concerning the data, the Department is responsible for reviewing the QAP and SAP and contacting the monitoring entity for additional data validation information, as necessary. This will require additional, but not significant staff resources to review the data submissions.

Department staff must determine whether there is sufficient data (at least ten temporally independent samples, for example) to evaluate the surface water and whether there is sufficient evidence of impairment for listing. Much of the data assessment protocols have already been developed as part of the state's 305(b) water quality assessment, and there are no additional costs to implement the assessment portion of these rules. If there is evidence of possible impairment in a surface water but documentation does not meet the minimum criteria for listing (insufficient number of samples, for example), the surface water will be assigned to the Targeted Monitoring List.

To develop a sufficient amount of monitoring information on the state's surface waters, the Department is creating a separate Targeted Monitoring Team to perform follow up monitoring on both ambient sampling sites and post-TMDL monitoring sites. This team will start with four FTEs. Two FTEs are existing positions that will be reassigned and two FTEs are new positions. The Department anticipates that the first year cost of this new team is approximately \$185,000 (\$140,000 salaries and benefits, \$25,000 vehicle, \$20,000 equipment). While the Department cannot predict the amount of additional monitoring that will be needed it is estimated that the annual monitoring budget will be \$150,000-\$200,000.

B. Estimated Costs and Benefits to Political Subdivisions

The credible data requirements of R18-11-602 may affect state and federal agencies and local governments who choose to monitor surface waters and submit the data for assessment, listing, and TMDL development.

C. Businesses Directly Affected By the Rulemaking

These rules do not regulate private businesses, residences, entities or activities. Some regulated parties, volunteer and watershed monitoring groups, private individuals, and environmental groups may voluntarily submit data to the Department for consideration under this rulemaking, and if so, are required to meet the credible data requirements.

This rulemaking has specific requirements concerning the choice of methods based on the applicable water quality standard. For example, the requirement to choose the analytical method with the method detection limit at or below the applicable surface water quality standard or the use of clean analytical technique for certain constituents. These requirements may result in samples being analyzed by alternate laboratories or being subcontracted to alternate laboratories and therefore, may impact the Department's and other monitoring entity's laboratory contracts.

R18-11-602(A)(5) requires that any laboratory submitting analytical results for listing or TMDL decisions be state-licensed, exempted by the state, or be a federal or academic laboratory that can demonstrate comparable quality assurance/quality control procedures. If a laboratory does not meet this criteria and wishes to submit analytical results, the laboratory must obtain licensing from the Arizona Department of Health Services and pay any associated fees.

D. Estimated Costs and Benefits to Private and Public Employment

Private and public employment are not directly affected by the implementation and enforcement of this rulemaking.

E. Estimated Costs and Benefits to Consumers and the Public

This rulemaking provides consumers and the public with a clearly defined listing process. The core of this process is based on sufficient credible and scientifically defensible data, which in turn, provides an increased confidence in the 303(d) listing process and TMDL decisions. The dual requirements of sufficient and credible data translates to higher confidence that a listed surface water is truly impaired.

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This rulemaking ensures that impaired surface waters are recognized and that human health and environmental concerns are addressed. The prioritization criteria allows the Department to focus its efforts and resources on those surface waters in greatest need of restoration.

F. Estimated Costs and Benefits to State Revenues

This rulemaking will have no impact on state revenues.

9. The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:

Name: Shirley J. Conard
Address: Arizona Department of Environmental Quality
3033 N. Central Avenue, MO401A-422
Phoenix, AZ 85012-2809
Telephone: (602) 207-4632
Fax: (602) 207-4674
E-mail: conard.shirley@ev.state.az.us

10. The time, place, and nature of the proceedings for the adoption, amendment, or repeal of the rule, or if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rule:

Date: Tuesday, September 25, 2001
Time: 4:00 p.m.
Location: Department of Environmental Quality
3033 N. Central Avenue, Room 1710
Phoenix, AZ 85012-2809
Nature: Oral Proceeding

Date: Thursday, September 27, 2001
Time: 4:00 p.m.
Location: State of Arizona Building
400 West Congress, Room 444
Tucson, AZ
Nature: Oral Proceeding

Date: Tuesday, October 2, 2001
Time: 4:00 p.m.
Location: Game and Fish Department, 3500 S. Lake Mary Road
Flagstaff, AZ 86001
Nature: Oral Proceeding

Written comments on the proposed rules or preliminary economic, small business, and consumer impact statement must be received by 5:00 p.m., Friday, October 5, 2001.

Persons with a disability may request a reasonable accommodation such as a sign language interpreter, by contacting the Department's coordinator, Katie Huebner, at (602) 207-4794 (voice) or 1-800-367-3839 (TDD Relay). Requests should be made as early as possible to allow time to arrange the accommodation.

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11. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:

None

12. Incorporations by reference and their location in the rules:

R18-11-604(D)(1)

“Narrative Toxicity Standard 303(d) Program Implementation Procedures,” [effective date of rule], Arizona Department of Environmental Quality.

13. Was this rule previously adopted as an emergency rule:

No

14. The full text of the rules follows:

TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 11. DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY STANDARDS

ARTICLE 6. IMPAIRED WATER IDENTIFICATION

Section

<u>R18-11-601.</u>	<u>Definitions</u>
<u>R18-11-602.</u>	<u>Credible Data</u>
<u>R18-11-603.</u>	<u>General Data Interpretation Requirements</u>
<u>R18-11-604.</u>	<u>Criteria for Identifying Surface Water as Impaired or Making a TMDL Decision</u>
<u>R18-11-605.</u>	<u>Removing a Stressor or Surface Water from the 303(d) List</u>
<u>R18-11-606.</u>	<u>TMDL Priority Criteria for 303(d) Listed Surface Waters</u>

ARTICLE 6. IMPAIRED WATER IDENTIFICATION

R18-11-601. Definitions

In addition to the definitions established in A.R.S. §§ 49-201 and 49-231, and A.A.C. R18-11-101, the following terms apply to this Article:

1. “303(d) List” means the list of impaired waters required under section 303(d) of the Clean Water Act and A.R.S. Title 49, Chapter 2, Article 2.1.
2. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility.
3. “Credible and scientifically defensible data” means data submitted, collected, or analyzed using:
 - a. Quality assurance and quality control procedures;
 - b. Samples or analyses representative of water quality conditions at the time the data was collected;
 - c. Data consisting of an adequate number of samples based on the nature of the water in question and the parameters being analyzed; and
 - d. Methods of sampling and analysis, including analytical, statistical, and modeling methods that are generally accepted and validated in the scientific community as appropriate for use in assessing the condition of the water.
4. “EPA” means the U.S. Environmental Protection Agency.
5. “Impaired water” means a Navigable water for which credible scientific data exists that satisfies the requirements of § 49-232 and that demonstrates that the water should be identified pursuant to 33 United States Code § 1313(d) and the regulations implementing that statute. A.R.S. § 49-231(1)
6. “MDL” means method detection limit, which is the minimum concentration of an analyte that can be detected with 99% confidence that the analyte concentration is greater than zero, as defined by the specific laboratory method.
7. “Monitoring entity” means the Department or any person who collects physical, chemical, or biological data used for impaired waters identification or a TMDL decision.
8. “Naturally occurring condition” means the condition of a surface water in the absence of human-induced alterations, which is based on the best scientific information available to the Department.
9. “Pollutant” means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. 33 U.S.C. 1362(6)
10. “QAP” means a quality assurance plan detailing how environmental data operations are planned, implemented, and assessed for quality during the duration of a project.

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11. “Sampling event” means one or more samples taken under consistent conditions on one or more days at a distinct station or location.
12. “SAP” means a site specific sampling and analysis plan that describes the specifics of sample collection to ensure that data quality objectives are met and that samples collected and analyzed are representative of surface water conditions at the time of sampling.
13. “Stressor” means a pollutant or other identified cause of impairment to a surface water.
14. “TMDL” means total maximum daily load.
15. “TMDL decision” means a decision by the Department to:
 - a. Prioritize an impaired water for TMDL development.
 - b. Develop a TMDL for an impaired water, or
 - c. Develop a TMDL implementation plan.
16. “Total maximum daily load” means an estimation of the total amount of a pollutant from all sources that may be added to a water while still allowing the water to achieve and maintain applicable surface water quality standards. Each total maximum daily load shall include allocations for sources that contribute the pollutant to the water, as required by section 303(d) of the clean water act (33 United States Code section 1313(d)) and regulations implementing that statute to achieve applicable surface water quality standards. A.R.S. § 49-231(4)
17. “Upset”:
 - (a) means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors that are beyond the reasonable control of the permittee.
 - (b) does not include noncompliance to the extent that it is caused by operational error. Improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance or careless or improper operation. A.R.S. § 49-255(8)
18. “WOARF” means the water quality assurance revolving fund established under A.R.S. § 49-281.

R18-11-602. Credible Data

A. To assure that data is credible and relevant to an impaired waters identification or a TMDL decision:

1. Quality Assurance Plan. A monitoring entity shall develop a QAP that complies with this Section and contains, at a minimum, the following 26 elements.
 - a. Title and approval page, which includes the title and data of the QAP, the names of people and organizations involved in the project, and the names, titles, and signatures of appropriate approving officials such as the project manager and project quality assurance officer.
 - b. Table of contents, which includes section headings with appropriate page numbers and a list of figures and tables.
 - c. Distribution list of individuals and organizations, which includes representatives of groups involved in monitoring who will receive a copy of the approved QAP.
 - d. Project/Task organization, which identifies all key personnel and organizations involved in monitoring program/task and includes their specific roles and responsibilities.
 - e. Project identification and objectives, which includes a statement which describes the goals of the sampling project and identifies how the data will be used and the entity that will use it.
 - f. Project/Task Description, which describes how the monitoring work will be performed and where it will take place, the types of samples that will be taken, and what kind of conditions will be measured, which includes how data results will be evaluated.
 - g. Data quality objectives for measurement data, which includes the quantitative and qualitative terms used to describe how that data meets the project objectives, which includes precision, accuracy, completeness, comparability, and representativeness.
 - h. Training background of each person collecting data, which includes the proper use and calibration of field equipment used to collect data, sampling protocols, quality assurance and quality control procedures, and, for water data collection, assurance that the person supervising water data collection has received classroom and field instruction provided by the Department, Arizona Department of Health Services, or by an accredited institution.
 - i. Documentation and records for data collected, which includes field sheets and notes, and laboratory results.
 - j. Health and safety plan.
 - k. Sampling methods, which describes the sampling methods that will be used for the project and include information on sample parameters, how samples will be taken, equipment and containers, and sample preservation methods. Identify the time between taking and analyzing samples (holding time).
 - l. Sample handling and custody, which describes the procedure to properly identify samples and the procedure used when bringing samples from the field to the laboratory for analysis.
 - m. Analytical methods, which describes the analytical methods and equipment needed for analysis of each parameter, either in the field or laboratory. Identify the laboratory performing the analysis.

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- n. Quality control, which describes the number and type of field and laboratory quality control samples for the project. This description may include field blanks, travel blanks, equipment blanks, method blanks, split samples, duplicate samples, spiked samples, or describing the procedures for routine inspection and preventative maintenance of field and laboratory equipment and facilities.
 - o. Instrument calibration and frequency, which describes how and when sampling and analytical instruments will be calibrated. Include the standards used to calibrate the instruments and describe records for equipment calibration. List the equipment, including tolerance, range, and manufacturer's specifications.
 - p. Inspection and acceptance requirements for supplies, which describes the supplies used for the project, including sample bottles and reagents.
 - q. Data acquisition, which describes types of data not obtained through monitoring activities.
 - r. Data management, which describes the data handling process from field to laboratory to data storage and use. Include how data is checked for accuracy and completeness.
 - s. Assessments and response actions, which describes how field, laboratory, and data management activities and sampling personnel are evaluated to ensure data quality. Include a description on how the project will correct any problems identified during these assessments.
 - t. Reports, which describes the frequency, content, and distribution of reports and detail project status, results of internal assessments and audits, and how quality assurance problems are resolved.
 - u. Data review, validation and verification, which describes the person who will review the data and the decision-making process for accepting, rejecting, or qualifying data.
 - v. Validation and verification methods, which describes the procedure used to validate and verify data and the procedures used if errors are detected.
 - w. Reconciliation with data quality objectives, which describes the process used to determine whether the data collected meets the project objectives, which may include discarding data, setting limits on data use, or revising data quality objectives.
 - x. Sample equipment decontamination procedures, outlining specific decontamination procedures for sample collection and preparation of equipment, identify the frequency of decontamination, and describe the procedures used to verify decontamination.
 - y. Waste disposal methods, which identifies wastes that will be generated in sampling and methods for disposal of those wastes.
2. Sampling and analysis plan. A monitoring entity shall develop a SAP that contains the following elements.
- a. Site-specific project and data quality objectives, including a description of the background of the project and the site. Include historical information and aerial photographs, as appropriate;
 - b. Sampling process design, including a description of the experimental design of the project;
 - c. Types of samples to be collected;
 - d. Sampling frequency;
 - e. Sampling periods;
 - f. Sampling locations, including a rationale for the site selection;
 - g. A discussion of whether any weather, seasonal variations, stream flow, lake level, or site access may affect the project and how these factors will be addressed;
 - h. Personnel who will collect and analyze the samples;
 - i. Assurance that samples are spatially and temporally representative of the surface water;
 - j. Assurance that samples are representative of water quality conditions at the time of sampling; and
 - k. Assurance that collection and analytical methods are reproducible.
3. Exclusions. The Department may determine that the following data is credible and relevant to an impaired water identification or TMDL decision in any of the following situations provided the conditions in subsections (A)(4), (A)(5), and (B) are met and the data was collected in the surface water evaluated for impairment:
- a. The data was collected before [effective date] under an alternate QAP or SAP determined by the Department to yield results of comparable reliability to the data collected under subsections (A)(1) and (A)(2);
 - b. The data was collected after [effective date] as part of an ongoing monitoring effort by a governmental agency, under an alternate QAP or SAP determined by the Department to yield results of comparable reliability to the data collected under subsection (A)(1) and (A)(2); or
 - c. The data was or is collected under the terms of an NPDES or AZPDES permit or a compliance order issued by the Department or EPA, a consent decree signed by the Department or EPA, or a sampling program approved by the Department or EPA under WQARF or CERCLA, provided that the permit, order or decree requires that data is collected under a QAP or SAP determined by the Department to yield results of comparable reliability to data collected under subsections (A)(1) and (A)(2).
4. Data collection, preservation, and analytical procedures.

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- a. The monitoring entity shall collect, preserve, and analyze data using methods of sample collection, preservation, and analysis established under A.A.C. R9-14-610. For TMDL development, the monitoring entity shall use, where available and appropriate to the stressor, clean sample collection and analytical techniques.
 - b. For data collected after [effective date], the monitoring entity shall use an analytical method specified in subsection (A)(4)(a) with an MDL less than or equal to the applicable surface water quality standard. If no analytical method provides an MDL less than or equal to the surface water quality standard for a specific stressor, then the monitoring entity shall use the method with the lowest MDL.
 5. Laboratory procedures. The monitoring entity shall ensure that chemical and toxicological samples are analyzed in a state-licensed laboratory, a laboratory exempted by the Arizona Department of Health Services for specific analyses, or a federal laboratory or academic laboratory that can demonstrate:
 - a. Proper Quality Control/Quality Assurance procedures substantially equal to those required by the Arizona Department of Health Services, and
 - b. Use of methods identified in subsection (A)(4).
- B. Data submission and recordkeeping.**
1. The monitoring entity shall:
 - a. Before or with data submission, provide the Department with:
 - i. A copy of the SAP and QAP developed under subsections (A)(1) and (A)(2);
 - ii. A statement in writing affirming that the methods and procedures specified in the QAP and SAP were followed;
 - iii. The name of the laboratory used for sample analyses;
 - iv. The laboratory's certification number, if a state-licensed laboratory;
 - v. The Quality Assurance/Quality Control documentation, including the analytical methods used by the laboratory, method number, detection limits, and any blank duplicate and spike sample information necessary to explain a deviation; and
 - vi. The data reporting unit of measure.
 - b. Notify the Department in writing, before or at the time of the next submission of sample data, if any changes are made to the QAP or SAP.
 2. The monitoring entity shall submit a summary of any field notes, laboratory comments, or laboratory notations concerning any deviation from standard procedures, quality control, or quality assurance that affects data reliability, data interpretation, or data validity with each sample data submission
 3. The monitoring entity shall provide other information such as complete field notes, photographs, climatic or other information related to flow, field conditions, or documented stressors in the watershed, if requested by the Department to assist in interpreting or validating the data.
 4. The monitoring entity shall maintain all records, including sample results for the duration of the listing cycle. If there is a listing, the records shall be maintained for the duration of the listing.

R18-11-603. General Data Interpretation Requirements

The Department shall use the following data conventions to interpret data for impaired waters identification and TMDL decisions:

1. Data reported below MDLs:
 - a. If the analytical method complies with R18-11-602(A)(4)(b), the Department shall:
 - i. Consider a measurement value reported as less than the applicable MDL as meeting the surface water quality standard; and
 - ii. Evaluate the result, using an appropriate statistical test based on the percentage of less than measurement values in the dataset, when developing statistics, trend analyses, or TMDLs; or
 - iii. Set the result equal to the MDL when developing statistics, trend analyses, or MDL development.
 - b. If the analytical method does not comply with R18-11-602(A)(4)(b), the Department shall set the result equal to the MDL when evaluating whether a surface water is meeting standards or when developing statistics, trend analyses, or TMDLs.
2. The Department shall consider a field sample measurement within the manufacturer's specification for accuracy to comply with surface water quality standards and shall identify field equipment specifications used for each listing cycle or TMDL developed.
3. The Department shall resolve a data conflict by considering:
 - a. Monitoring methods and quality control procedures, as described in the QAP or SAP, or both (results obtained from more accurate and reliable monitoring methods and procedures are weighted heavier than results obtained from less rigorous methods and procedures);
 - b. The age of the measurements with newer measurements weighted heavier than older measurements unless the older measurements are more representative of critical flow conditions;

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- c. The amount or frequency of the measurements, with more frequent data collection weighted heavier than nominal datasets; and
- d. Factors identified in R18-11-604(B)(1)(c).
- 4. Invalid data. The Department shall exclude the following data for impaired waters identification or a TMDL decision:
 - a. Measurements outside the range of possible physical or chemical measurements for the pollutant or measurement equipment;
 - b. Data transcription errors or laboratory errors; and
 - c. Statistical outliers, identified through statistical analysis appropriate to the dataset, that do not represent valid measures of water quality for the dataset.
- 5. The Department shall employ fundamental statistical tests appropriate for the collected data and type of surface water for impaired waters identification.
- 6. The Department shall employ fundamental statistical tests or modeling appropriate for the collected data and type of surface water, or both, for TMDL decisions.

R18-11-604. Criteria for Identifying Surface Water as Impaired or Making a TMDL Decision

- A.** Applicability. The Department shall not consider, as a basis for identifying a surface water as impaired or making a TMDL decision, an exceedance of a surface water quality standard, if:
- 1. The exceedance is due solely to pollutant loadings from a naturally occurring condition;
 - 2. An exceedance due to an activity exempted under R18-11-102, R18-11-116, R18-11-117, or R18-11-118, has occurred;
 - 3. The exceedance is based on data that reflects the impact of a spill event, upset, a bypass from a known source, or an end-of-pipe NPDES or AZPDES permit violation, that is the subject to enforcement or remediation measures by the Department or EPA; or
 - 4. The data was collected within a mixing zone or under a variance or nutrient waiver established in an NPDES or AZPDES permit, for the specific parameter and the result does not exceed the alternate discharge limitation established in the permit.
- B.** Impaired waters determination. The Department shall evaluate all readily available, credible and scientifically defensible data to determine if a surface water is impaired due to persistent, seasonal, or recurrent conditions.
- 1. Weight-of-evidence. The Department shall consider the following factors to determine if the evidence supports a finding of impairment:
 - a. Exceedances of a numeric surface water quality standard specified in subsection (C);
 - b. Exceedances of a narrative surface water quality standard specified in subsection (D);
 - c. As appropriate, the role of soil, geology, hydrology, flow regime, biological communities, geomorphology, climate, natural processes, and anthropogenic influences on the results in subsections (B)(1)(a) and (B)(1)(b), as follows:
 - i. Whether the data provides a direct measure of an impact on a designated use (direct measurements are weighted heavier than measurements of an indicator or surrogate parameter);
 - ii. The characteristics of the stressor, such as its solubility in water, bioaccumulation potential, sediment sorption potential, or degradation characteristics, to assist in determining which data more accurately indicates the stressor's presence and potential for use-impairment.
 - d. Other available water quality or related information, including the factors identified in R18-11-603(3), that indicates which data is of highest quality or more representative. Other available water quality information may include NPDES or AZPDES water quality discharge data, as applicable.
 - 2. If the Department determines that a numeric surface water quality standard for a pollutant is not exceeded in a surface water under subsection (C), but that there is evidence of a narrative standard exceedance in that surface water under subsection (D) as a result of the presence of the pollutant in the surface water, the Department shall not list the surface water as impaired unless the evidence indicates that the numeric water quality standard is insufficient to protect the surface water and the Department justifies the listing based on any of the following:
 - a. The narrative standard data provides a more direct indication of impairment as supported by professionally prepared and peer-reviewed articles or journals;
 - b. Sufficient evidence of impairment exists due to synergistic effects of pollutant combinations or site-specific environmental factors; or
 - c. The pollutant is bioaccumulative, relatively insoluble in water, or has other characteristics that indicate it is occurring in the specific surface water at levels below the MDL, and will impair designated uses.
 - 3. Based on the factors in subsections (B)(1) or (B)(2), if the surface water, or a portion of the surface water, is determined to be impaired, the Department shall place the surface water, or portion of surface water, and the stressor or stressors causing the impairment on the 303(d) List. In listing the surface water, the Department shall designate the water segment in accordance with EPA's Reach System based on the U.S. Geological Survey 8-digit Hydrologic Unit Codes, unless the data or additional data indicates a shorter or longer segment is impaired.

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C. Numeric water quality standards evaluation. The Department shall compile and analyze all reasonably current, applicable credible and scientifically defensible data to evaluate if a surface water is exceeding a numeric surface water quality standard.

1. The Department shall use the following general criteria to evaluate surface water data for numeric surface water quality standards exceedances:

- a. Samples are spatially independent and are considered distinct stations or locations if they are collected more than 200 meters apart, or are collected less than 200 meters apart to characterize the effect of an intervening tributary, outfall, or other pollution source, or significant hydrographic or hydrologic change;
- b. Samples are temporally independent if they are collected at the same station or location more than seven days apart;
- c. For multiple samples that are not spatially or temporally independent, or for multiple samples in a lake that are not depth independent, the sampling time or sampling location shall be represented by the following resultant value:
 - i. The appropriate measure of central tendency for the dataset. Samples evaluated for an exceedance of:
 - (1) The water quality criteria for a pollutant listed in 18 A.A.C. 11, Article 1, Appendix A, Table 1, except for nitrate or nitrate/nitrite;
 - (2) The chronic water quality criteria for a pollutant listed in 18 A.A.C. 11, Article 1, Appendix A, Table 2;
 - (3) A pollutant with a criteria expressed as an annual or geometric mean; or
 - (4) The water quality criteria for temperature or the single sample maximum criteria for turbidity, nitrogen, and phosphorus in R18-11-109;
 - (5) The criteria for radiochemicals in R18-11-109(D)(2); or
 - (6) All single sample maximum criteria in R18-11-112, except chromium.
 - ii. The maximum value of the dataset. Samples evaluated for an exceedance of:
 - (1) The acute water quality criteria for a pollutant listed in 18 A.A.C. 11, Article 1, Appendix A, Table 2 and acute criteria in R18-11-112;
 - (2) The criteria for nitrate or nitrate/nitrite in 18 A.A.C. 11, Article 1, Appendix A, Table 1;
 - (3) The single sample maximum criteria for bacteria in subsections R18-11-109(B) and (C); or
 - (4) The 90th percentile criteria for nitrogen and phosphorus in R18-11-109(H) and R18-11-112.
 - iii. The worst case measurement of the dataset. Samples evaluated for an exceedance of:
 - (1) Dissolved oxygen under R18-11-109(D). For purposes of this subsection, “worst case measurement” means the minimum value for dissolved oxygen;
 - (2) pH criteria under R18-11-109(G). For purposes of this subsection, “worst case measurement” means both the minimum and maximum value for pH.

2. Number of samples and sampling events. The Department shall consider the following when evaluating a surface water for impairment:

- a. Perennial surface waters.
 - i. At least ten spatially independent samples are collected over three or more sampling events that are separated by at least seven days; and
 - ii. If seasonal impairment is suspected, the samples shall establish the occurrence of seasonal impairment.
- b. Intermittent and ephemeral surface waters. At least ten spatially independent samples are collected over two or more sampling events that are separated by at least seven days.

3. Evaluation of numeric standards exceedance.

- a. Evidence of possible impairment of a surface water exists, based on exceedances of numeric standards, if the number of exceedances of the applicable surface water quality standard is greater than or equal to the number listed in Table 1 for the sample size, as determined at the 90% confidence level that the actual frequency of exceeding the standard is greater than or equal to 10%.

TABLE 1. MINIMUM NUMBER OF SAMPLES EXCEEDING THE NUMERIC STANDARD								
Number of Samples		Number of Samples Exceeding Standard	Number of Samples		Number of Samples Exceeding Standard	Number of Samples		Number of Samples Exceeding Standard
From	To		From	To		From	To	
10	11	3	165	173	23	344	352	43
12	19	4	174	182	24	353	361	44
20	25	5	183	191	25	362	370	45
26	32	6	192	199	26	371	379	46
33	40	7	200	208	27	380	388	47
41	47	8	209	217	28	389	397	48
48	55	9	218	226	29	398	406	49

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<u>56</u>	<u>63</u>	<u>10</u>	<u>227</u>	<u>235</u>	<u>30</u>	<u>407</u>	<u>415</u>	<u>50</u>
<u>64</u>	<u>71</u>	<u>11</u>	<u>236</u>	<u>244</u>	<u>31</u>	<u>416</u>	<u>424</u>	<u>51</u>
<u>72</u>	<u>79</u>	<u>12</u>	<u>245</u>	<u>253</u>	<u>32</u>	<u>425</u>	<u>443</u>	<u>52</u>
<u>80</u>	<u>88</u>	<u>13</u>	<u>254</u>	<u>262</u>	<u>33</u>	<u>435</u>	<u>443</u>	<u>53</u>
<u>89</u>	<u>96</u>	<u>14</u>	<u>263</u>	<u>270</u>	<u>34</u>	<u>444</u>	<u>452</u>	<u>54</u>
<u>97</u>	<u>104</u>	<u>15</u>	<u>271</u>	<u>279</u>	<u>35</u>	<u>453</u>	<u>461</u>	<u>55</u>
<u>105</u>	<u>113</u>	<u>16</u>	<u>280</u>	<u>288</u>	<u>36</u>	<u>462</u>	<u>470</u>	<u>56</u>
<u>114</u>	<u>121</u>	<u>17</u>	<u>289</u>	<u>297</u>	<u>37</u>	<u>471</u>	<u>479</u>	<u>57</u>
<u>122</u>	<u>130</u>	<u>18</u>	<u>298</u>	<u>306</u>	<u>38</u>	<u>480</u>	<u>489</u>	<u>58</u>
<u>131</u>	<u>138</u>	<u>19</u>	<u>307</u>	<u>315</u>	<u>39</u>	<u>490</u>	<u>498</u>	<u>59</u>
<u>139</u>	<u>147</u>	<u>20</u>	<u>316</u>	<u>324</u>	<u>40</u>	<u>499</u>	<u>500</u>	<u>60</u>
<u>148</u>	<u>156</u>	<u>21</u>	<u>325</u>	<u>333</u>	<u>41</u>			
<u>157</u>	<u>164</u>	<u>22</u>	<u>334</u>	<u>343</u>	<u>42</u>			

- b. Notwithstanding subsections (C)(2)(a)(i) and (C)(2)(b) and when there are less than ten samples for the surface water, evidence of possible impairment of a surface water based on exceedances of numeric standards exists where:
 - i. Three or more temporally independent samples exceed the water quality criteria in subsection (C)(1)(c)(i)((1)), (C)(1)(c)(i)((4)), (C)(1)(c)(i)((5)), or (C)(1)(c)(iii); or
 - ii. More than one temporally independent sample exceeds the water quality criteria in subsections (C)(1)(c)(ii)((1)) through (C)(1)(c)(ii)((3)) in any three-year period, or
 - iii. More than one exceedance of an annual mean, 90th percentile, aquatic and wildlife chronic criteria, or a bacteria 30-day geometric mean water quality standard, specified in R18-11-109, R18-11-110, R18-11-112, or 18 A.A.C. 11, Article 1, Appendix A, Table 2 occurs.

D. Narrative water quality standards evaluation. The Department shall compile and analyze all reasonably current, applicable credible and scientifically defensible data to evaluate if a surface water is exceeding the narrative toxicity water quality standard under R18-11-108(A)(5):

- a. Evidence of possible impairment of a surface water exists, based on an exceedance of the narrative toxicity standard, if a fish consumption advisory is issued by the Arizona Game and Fish Department or federal agency, in consultation with the Department.
- b. The appropriate criteria for issuance of a fish consumption advisory are specified in the *Narrative Toxicity Standard 303(d) Implementation Procedures, [effective date of rule]*, published by the Arizona Department of Environmental Quality. This material is incorporated by reference, does not include any later amendments or editions of the incorporated matter, and is on file with the Department and the Office of the Secretary of State.

R18-11-605. Removing a Stressor or Surface Water from the 303(d) List

A. The Department shall remove a stressor from an impaired water placed on the 303(d) List using one or more of the following criteria, which are not more stringent than the criteria for adding a surface water to the list:

- 1. The Department developed, and EPA approved, a TMDL for the stressor.
- 2. The data used for listing the surface water in R18-11-604 is superseded by more recent credible data collected under R18-11-602, showing that the surface water meets the applicable numeric or narrative surface water quality standard. When evaluating data to remove a stressor from the 303(d) List, the more recent data shall be collected by a monitoring entity under similar hydrologic or climatic conditions as occurred when the samples were taken that indicated impairment, if those conditions still exist.
- 3. The surface water no longer meets the criteria for impairment based on a change in the applicable surface water quality standard or a designated use approved by EPA under section 303(c)(1) of the Clean Water Act.
- 4. The surface water no longer meets the criteria for impairment for the specific narrative water quality standard based on a change in narrative water quality standard implementation procedures.
- 5. A re-evaluation of the data that indicates that the surface water does not meet the criteria for impairment because of a deficiency in the original analysis.
- 6. The surface water is impaired solely due to naturally occurring conditions.

B. The Department shall remove a surface water from the 303(d) List if all stressors for the surface water are delisted.

R18-11-606. TMDL Priority Criteria for 303(d) Listed Surface Waters

A. In addition to the factors specified in A.R.S. § 49-233(C) the Department shall consider the following when prioritizing impaired waters for development of TMDLs:

- 1. A change in a water quality standard during a Triennial Review;

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2. The date the surface water was added to the 303(d) List;
 3. The presence of species listed as threatened or endangered under section 4 of the federal Endangered Species Act;
 4. The complexity of the TMDL;
 5. State, federal, and tribal policies and priorities;
 6. Efficiencies of coordinating TMDL development with the Department's surface water monitoring program, with the watershed monitoring rotation, or with remedial programs.
- B.** The Department shall prioritize surface waters for TMDL development based on the factors specified in A.R.S. § 49-233(C) and in subsection (A) above. Unless a different priority is appropriate based on the factors listed in subsection (A) and A.R.S. § 49-232(C), the Department shall:
1. Consider an impaired surface water a high priority based on one of the following factors:
 - a. The listed stressor poses a severe threat to the health and safety of humans, aquatic life or wildlife;
 - b. A new, or modified individual NPDES or AZPDES permit is sought for a new, or modified discharge to the impaired water;
 - c. The listed surface water is listed as a unique water in R18-11-112;
 - d. The listed surface water contains a species listed as threatened or endangered under the federal Endangered Species Act; or
 - e. A delay in conducting the TMDL could jeopardize the Department's ability to gather sufficient credible data necessary to develop the TMDL.
 2. Consider an impaired surface water a medium priority based on one of the following factors:
 - a. The surface water fails to meet more than one designated use;
 - b. The stressor exceeds more than one surface water quality standard; or
 - c. The administrative needs of the Department, including TMDL schedule commitments with EPA, permitting requirements or basin priorities.
 3. Consider an impaired surface water a low priority based on one of the following factors:
 - a. The surface water is ephemeral. If the presence of the stressor in the listed water poses a threat to the health and safety of humans, aquatic life or wildlife using the water or is contributing to the impairment of a downstream perennial surface water the Department shall re-prioritize the surface water;
 - b. The stressor poses a low ecological and human health risk;
 - c. Insufficient data exists to determine the source of the pollutant load;
 - d. The surface water or stressor is proposed for delisting based on R18-11-605;
 - e. The Department has modified or formally proposed for modification the designated use or applicable surface water quality standard, which would result in an impaired water no longer being impaired, but the modification has not yet been approved by EPA; and
 - f. The uncertainty of timely coordination with national and international entities concerning international waters.
 4. Prioritize an impaired water where none of the factors listed in subsections (B)(1) through (B)(3) are present based on the Department's evaluation of the presence or absence of the factors listed in subsection (A) and A.R.S. § 49-233(C).
 5. Target high priority waters for development of TMDLs within two years following publication of the final 303(d) List.

NOTICE OF PROPOSED RULEMAKING

TITLE 20. COMMERCE, BANKING, AND INSURANCE

CHAPTER 4. BANKING DEPARTMENT

PREAMBLE

1. Sections Affected

R20-4-701
R20-4-702
R20-4-703
R20-4-704
R20-4-706
R20-4-707
R20-4-708

Rulemaking Action

Amend
Amend
Amend
Amend
Repeal
Amend
New Section

2. The specific statutory authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):

Authorizing statute: A.R.S. § 6-123(2)

Implementing statutes: A.R.S. §§ 6-123(1), 6-811, 6-817, 6-831, 6-834(A), 6-847.01(B), 6-847.01(C)(2), and 6-847.02(G)

3. A list of all previous notices appearing in the Register addressing the proposed rule:

Notice of Proposed Rulemaking: 6 A.A.R. 4613, December 8, 2000

4. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:

Name: John P. Hudock
Address: 2910 North 44th Street, Suite 310
Phoenix, AZ 85018
Telephone: (602) 255-4421, ext. 167
Fax: (602) 381-1225
E-mail: jhudock@azbanking.com

5. An explanation of the rule, including the agency's reasons for initiating the rule:

In a Five-year Rule Review Report that the Governor's Regulatory Review Council approved on September 14, 1999, the Department promised to overhaul each of the Sections in Article 7. Most of those Sections were slated for amendment; one was to be considered for repeal. This proceeding is intended to fulfill that promise and remove dated statutory references in these Sections, reorganize text, remove passive constructions and pointless legalisms, streamline the writing, and rewrite each Section using modern rule writing standards.

In addition, this rulemaking will add an express recognition of the escrow agents' right to create and maintain records electronically.

Finally, in implementation of A.R.S. §§ 6-817(A)(3) and 6-817(A)(10), this proceeding will establish a set of criteria used by the Superintendent in evaluating an applicant's or escrow agent's financial condition and resources.

6. A reference to any study that the agency proposes to rely on in its evaluation of or justification for the proposed rule and where the public may obtain or review the study, all data underlying each study, any analysis of the study, and other supporting material:

The Department does not propose to rely on any study as an evaluator or justification for the proposed rule.

7. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

8. The preliminary summary of the economic, small business, and consumer impact:

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A. The Banking Department

The revision of these Sections will have some beneficial economic effect on the Department. The rewriting of the Sections will make the rules easier for escrow agents to understand and, therefore, easier for the Department to enforce.

The repeal of R20-4-706 will have a marginally beneficial effect on the Department because it will do away with the enforcement task for a Section that is of questionable legality.

The addition of R20-4-708 will clarify the Department's analysis under A.R.S. § 6-817.

B. Other Public Agencies

The state will incur normal publishing costs incident to rulemaking.

C. Private Persons and Businesses Directly Affected

Costs of services will not increase to any measurable degree. Nor should these revisions increase any escrow agent's cost of doing business in compliance with these rules.

D. Consumers

No measurable effect on consumers is expected.

E. Private and Public Employment

The Department expects no measurable effect on private and public employment.

F. State Revenues

This rulemaking will not change state revenues.

9. The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:

Name: John P. Hudock
Address: 2910 North 44th Street, Suite 310
Phoenix, AZ 85018
Telephone: (602) 255-4421, ext. 167
Fax: (602) 381-1225
E-mail: jhudock@azbanking.com

10. The time, place, and nature of the proceedings for the making, amendment, or repeal of the rule or, if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rule:

No oral proceedings are scheduled. The Department will schedule an oral proceeding on the proposed rule if it receives a written request for a proceeding within 30 days after the publication date of this notice, under the provisions of A.R.S. § 41-1023(C). Send requests to the Department personnel listed in items #4 and #9. The Department invites and will accept written comments on the proposed rule or the preliminary economic, small business, and consumer impact statement. Submit comments during regular business hours, at the address listed in question 9, until the close of the record for this proposed rulemaking. The record will close on the 31st day following publication of this notice, unless the Department schedules an oral proceeding.

11. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:

Not applicable

12. Incorporations by reference and their location in the rules:

There is no material incorporated by reference in these rules.

13. The full text of the rules follows:

TITLE 20. COMMERCE, BANKING, AND INSURANCE

CHAPTER 4. BANKING DEPARTMENT

ARTICLE 7. ESCROW AGENTS

Section
R20-4-701. Change in Location of Business — ~~A.R.S. § 6-814 (A)~~

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R20-4-702.	Account Practices and Records — A.R.S. § 6-831
R20-4-703.	Preservation of Records — A.R.S. § 6-831
R20-4-704.	Subsidiary Account Records — A.R.S. § 6-834(A)
R20-4-706.	Exemption of Impound Accounts — A.R.S. § 6-811(5) Repealed
R20-4-707.	Payment to the All Other Escrow Agents Account of the Arizona Escrow Guaranty Fund
<u>R20-4-708.</u>	<u>Financial Condition and Resources</u>

ARTICLE 7. ESCROW AGENTS

R20-4-701. Change in Location of Business — ~~A.R.S. § 6-814(A)~~

~~Any licensee under this Act who shall change the location of his place of business shall notify the Superintendent in writing, not later than five calendar days before such change of address. The notification required by this provision must be accompanied by the escrow license issued to the former place of business and, if approved by the Superintendent, such license will be amended and returned.~~

An escrow agent shall mail the Superintendent written notice of any change in the location of the escrow agent's business. The escrow agent shall ensure that the Superintendent receives the notice at least 5 days before the escrow agent conducts business at the new location. The escrow agent shall mail the fee required by A.R.S. § 6-126(A)(26), together with the current escrow license, to the Superintendent with the notice of change. The Superintendent shall change the submitted license to reflect the new business location and return it to the escrow agent.

R20-4-702. Account Practices and Records — ~~A.R.S. § 6-831~~

~~Each licensee under this Act shall maintain such records as will enable the Superintendent to reconstruct the details of each escrow transaction. Such records must contain, but are not necessarily limited to, the following:~~

- ~~1. Names of Seller, Buyer, Lender and/or Borrower and respective addresses as filed with the licensee.~~
- ~~2. Name and address of Real Estate Agent, if any.~~
- ~~3. Complete instructions under which the escrow is accepted.~~
- ~~4. Records and supporting documentation of all receipts and disbursements made through escrow.~~
- ~~5. Copy of the Escrow Settlement.~~

An escrow agent shall maintain records to enable the Superintendent to reconstruct the details of each escrow transaction. The records shall include the following:

1. The seller's name and address;
2. The buyer's name and address;
3. The lender's name and address, if any;
4. The borrower's name and address, if any;
5. The real estate agent's name and address, if any;
6. Complete escrow instructions;
7. Records and supporting documentation for each receipt and disbursement made through the escrow;
8. A copy of the escrow settlement.

R20-4-703. Preservation of Records — ~~A.R.S. § 6-831~~

~~No licensee under this Act shall destroy, remove or secrete any records, books, or accounts pertaining to any escrow transaction for a period of at least three years following the final settlement date of such escrow transaction.~~

An escrow agent shall preserve the records, books, and accounts pertaining to each escrow transaction for a period of at least three years following the final settlement date of the transaction. An escrow agent may use an electronic recordkeeping system. The Department shall not require an escrow agent to keep a written copy of the records, books, and accounts if the escrow agent can generate all information and copies of documents required by A.R.S. § 6-831 in a timely manner for examination or other purposes.

R20-4-704. Subsidiary Account Records — ~~A.R.S. § 6-834(A)~~

~~An escrow agent Every licensee under this Act shall maintain subsidiary account records that identify the funds deposited on deposit in each escrow. The total and the aggregate of all the credit balances in the such subsidiary accounts account records shall always at all times be equal to the balance of balances in the general ledger control account or accounts.~~

R20-4-706. Exemption of Impound Accounts — ~~A.R.S. § 6-811(5) Repealed~~

~~Any person who shall be responsible for the collection and maintenance of impound accounts for the purpose of paying taxes, special assessments and insurance shall not be subject to the provisions of this Act PROVIDED such person is not otherwise within the definition of an escrow agent.~~

R20-4-707. Payment to the All Other Escrow Agents Account of the Arizona Escrow ~~Guaranty~~ Recovery Fund

A. As used in this Section, unless otherwise specified,

1. "Account" means the money contributed by all other escrow agents, together with interest earned, as referenced in A.R.S. § 6-847.01(C)(2).

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- 2. "Fund" has the same meaning as in A.R.S. § 6-847(2).
- 3. "Gross Income" means:
 - i. That portion of the other escrow agent's income, for federal income tax purposes, that is apportionable to the state of Arizona under A.R.S. § 43-1139, if the other escrow agent has income from business activity that is taxable both in Arizona and in another state, or
 - ii. The other escrow agent's income, for federal income tax purposes, if the agent does not have income from business activity taxable in another state.
- 4. Other escrow agent" means each licensed escrow agent that is not required, under A.R.S. § 6-847.02(A), to contribute to the real property escrow agents account within the Arizona escrow recovery fund.

~~A. As used in this rule, an "Other Escrow Agent" means any licensed Escrow Agent that is not required to contribute to the Real Property Escrow Agents Account as prescribed in A.R.S. § 6-847.02(C).~~

~~B. Every other escrow agent Other Escrow Agent shall pay a contribution to the fund Fund in the following amounts as listed in this subsection:~~

- ~~1. Every person that is an Other Escrow Agent on January 1, 1993, shall pay a one time contribution into the Fund within 60 days after the effective date of this rule. The contribution shall be in the following amounts:~~

Gross Income for 1992	Contribution
Less than \$300,000	\$500
\$300,000 to 750,000	750
over 750,000	1,000

~~2.1. A From and after January 1, 1993, every person newly licensed upon becoming an other escrow agent Other Escrow Agent that has not already paid a one-time contribution into the fund shall pay a one-time contribution in the amount of \$500 into the fund Fund.~~

~~3.2. In addition to the payments required by paragraphs (1) and (2) of this subsection, each Other Escrow Agent shall pay into the Fund monies in accordance with the following schedule based upon its gross income generated by escrow fees, account servicing fees, and trustee and foreclosure fees, or \$1,000, whichever is greater, on or after January 1, 1993.~~

Also, each other escrow agent shall pay into the fund an amount calculated using the following table. Payments are based on the escrow agent's gross income received from the types of fees specified in the table. The amount any escrow agent pays annually under this subsection shall not be less than \$1,000.

Source of Gross Income	Percentage of Gross Income to be Paid
Amount <u>Account</u> Servicing Fees	1.25%
Other Escrow Fees	1.25%
Trustee & <u>and</u> Foreclosure Fees	1.00%

~~C. An other escrow agent shall make quarterly payments under subsection (B)(2). Each quarterly payment shall be at least \$250. A quarterly payment shall be due on the 15th day of the month following the end of each calendar quarter. Payments made pursuant to paragraph (B)(3) of this Section shall be made quarterly in an amount no less than \$250 and shall be due on the 15th day of the month following the end of the quarter for which the payment is made. With respect to payments for 1993, for the first two quarters, the payments shall be due within 60 days after the effective date of this rule. An other escrow agent shall submit reports, in the form required by the Superintendent, with each payment. Payments shall be accompanied by reports in the form required by the Superintendent.~~

~~D. Payments to the Fund pursuant to paragraph (B)(3) of this Section shall be required until the balance including interest of the all Other Escrow Agents Account equals \$750,000, at which time the Superintendent shall advise all contributors that have paid to the Fund for at least two years, in writing, that payments pursuant to paragraph (B)(3) of this Section be discontinued. Other Escrow Agents that have not paid to the Fund for at least two years at the time the payments are discontinued shall continue to pay to the Fund until they have contributed for two years.~~

Each other escrow agent shall make payments to the fund under subsection (B)(2) until the account balance, including interest, is \$750,000. At that time, the Superintendent shall give written notice to each other escrow agent that has made required payments for two years to stop making payments under subsection (B)(2). Other escrow agents that have not made payments under subsection (B)(2) for at least two years shall continue making payments for two years regardless of the account balance.

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- E.** ~~On or before January 31 of each year, if the account balance on December 31 of the previous year exceeds \$750,000 and the Superintendent determines that potentially covered claims will not be greater than the amount by which the account exceeds \$1 million, the Superintendent shall disburse monies in excess of \$1 million in the following manner:~~
- ~~1. The account balance shall first be reduced pursuant to A.R.S. § 6-847.04 (D).~~
 - ~~2. All Other Escrow Agents that have paid into the Fund shall receive a percentage of the remaining excess. The percentage shall be calculated by dividing that Escrow Agent's total contributions by the total account balance on December 31 of the applicable year.~~
 - ~~3. Any funds remaining after disbursement under paragraphs (1) and (2) of this subsection shall remain in the account. The Superintendent shall repay contributing other escrow agents on or before January 31st of each year if:~~
 - ~~1. The account balance on December 31st of the previous year is more than \$750,000, and~~
 - ~~2. The Superintendent determines that the total value of potential claims will not be more than the amount in the account that exceeds \$1 million.~~
- E.** The Superintendent will make repayments under subsection (E) as follows:
1. The Superintendent shall reimburse the Department under A.R.S. § 6-847.04 (D).
 2. The Superintendent shall pay a percentage of the remaining excess above \$1 million to each other escrow agent that has paid into the fund. The percentage payable to each other escrow agent shall be calculated by dividing each agent's total contributions by the total account balance on December 31st of the applicable year.
 3. Money remaining after disbursement according to subsections (F)(1) and (F)(2) shall remain in the fund.
- F.G.** The Superintendent may direct other escrow agents to resume subsection (B)(2) payments if ~~if~~ payments have been discontinued under subsection (D) ~~(C)~~ of this Section and the fund account balance is less than \$750,000. The Superintendent may, at his discretion, direct Other Escrow Agents, in writing, to resume payments in accordance with paragraph (B)(3) of this Section shall give the direction to resume payments in writing. Each ~~All~~ other escrow agent Other Escrow Agents shall resume subsection (B)(2) making payments beginning with the next full month following the date of the Superintendent's written direction the date of notice from the Superintendent.
- G.** ~~For purposes of this rule, if the Other Escrow Agent has income from business activity that is taxable both within and without the state of Arizona, then "Gross Income" shall mean that portion of the Other Escrow Agent's gross income for federal income tax purposes that is apportionable to the state of Arizona pursuant to A.R.S. § 43-1139. For all remaining Other Escrow Agents, "Gross Income" shall mean the Other Escrow Agent's gross income for federal income tax purposes.~~

R20-4-708. Financial Condition and Resources

The Superintendent shall consider the following criteria in evaluating an escrow agent's, other escrow agent's, or applicant's financial condition and resources under A.R.S. § 6-817:

1. Amount of positive net worth.
2. Amount of tangible net worth.
3. Amount of liquid assets.
4. Amount of cash provided by operations.
5. Ratio of debt to net worth.
6. Owner's personal financial resources.
7. Outside resources available.
8. Profitability.
9. Projected operating results.
10. Status as agent for a title insurance company, and
11. Sources of new business.